

# Index Medicus for the WHO Eastern Mediterranean Region

with Abstracts



## IMEMR Current Contents

March 2017

Vol. 16 No. 1



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# IMEMR Current Contents

## Rationale

The Index Medicus for the WHO Eastern Mediterranean Region (IMEMR) has sustained its indexing policy, which has made it a vital current awareness information tool, for technical staff of the Regional Office, health care staff, and medical professionals who are able now to access health literature published in the Region as soon as it is published. A document delivery service to support the Index has also been activated which will enable any user to acquire a copy of any article listed in the Index.

The cumulative version of the Index Medicus is available now on the Internet as part of EMRO web site. A CD-ROM version of the same is also being provided upon request.

## Scope and Coverage

The **IMEMR Current Contents** is issued on a quarterly basis including the most recent articles added to Index Medicus for the Eastern Mediterranean Region (IMEMR) Database<sup>1</sup>.

## Indexing Level

Each article has been indexed and assigned to a "Main Heading", plus added headings according to the Medical Subject Headings (MeSH) list of the National Library of Medicine (NLM). Up to five added headings (including the respective country) have been allowed. Subheadings (or qualifiers) are used in indexing to qualify MeSH headings by pinpointing some specific aspects of the concept represented by the heading, e.g. "**LIVER-Drug Effects**" indicates that the article is not about the liver in general, but about the effect of drugs on the liver.

## Organization of the IMEMR

### Subject Index

The Index is organized in alphabetical order, according to the Main Subject Headings (MeSH). In most cases one main subject is assigned to each article. Under the main subject, entries are sorted by Subheading in alphabetical order also. Each entry includes the bibliographic information of the article e.g. title of the article, author(s), first author's affiliation, journal title, year (date of publication), volume number, issue number, page numbers, number of references, subject descriptors and geographic descriptors. Abstracts have been added and are searchable on the database on the Internet. (as shown in Figure 1)

### Author Index

The IMEMR includes the author's index, which also indicates the subjects covered by each author. (Appendix I)

### List of EMR Journals by Country

The IMEMR includes an updated list of EMR Journals, which are indexed in the index. The list is sorted in alphabetical order by the country of publication, which also indicates the number of journals in each country. (Appendix II)

### List of EMR Journals by Title

The IMEMR includes an updated list of EMR Journals, which are indexed in the index. The list is sorted in alphabetical order by journal's title, which also indicates the status of indexing for each journal. (Appendix III)

## Computer facilities

The Current Contents has been produced using the UNESCO WINISIS package. Countries or journals publishers interested in a subset of the database may be provided with data sets in WINISIS format upon request.

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<sup>1</sup> Including the countries of Afghanistan, Bahrain, Djibouti, Egypt, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Libyan Arab Jamahiriya, Morocco, Oman, Pakistan, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syrian Arab Republic, Tunisia, United Arab Emirates, Yemen

## Availability of photocopies

Photocopies of articles cited in IMEMR may be obtained from EMRO Library free of charge upon request.

## Availability on the Internet

This issue, as well as all forthcoming issues, will appear in WHO/EMRO web site on the Internet, as part of the complete edition of the Index. Internet address is <http://www.emro.who.int/information-resources/imemr/imemr.html>

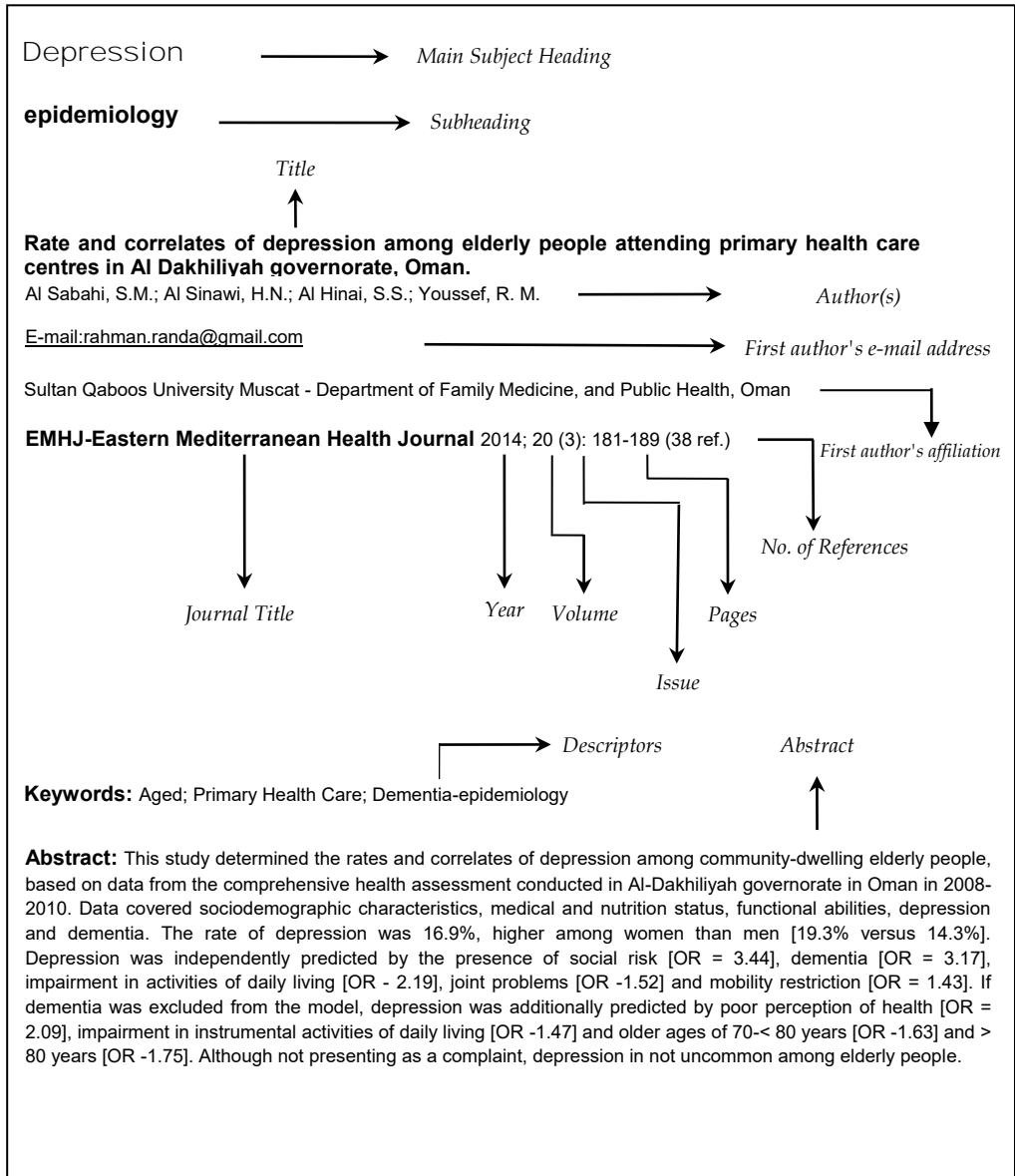


Figure (1): Sample of IMEMR citation

# Subject Index



## Abortion, Spontaneous

### therapy

#### **Manual vacuum aspiration [MVA]: a safe and effective alternative for the surgical management of early pregnancy loss**

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PNS Shifa

**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 194-198

**Keywords:** Pregnancy Complications; Pregnancy, High-Risk; Pregnancy; Prospective Studies; Safety Management; Vacuum Curettage

**Abstract:** Objective: To assess and document safety, efficacy and patient acceptability of Manual vacuum aspiration [MVA] in the management of early pregnancy loss [EPL], performed in the treatment room setting. Study Design: Quasi-experimental, [clinical trial]. Place and Duration of Study: Treatment Room, OBGYN department, PNS Shifa from Nov 2010 to 31[st] Mar 2013. Material and Methods: Single centre prospective study conducted at Obstetric and Gynecology department, PNS Shifa from Nov 2010 to Mar 2013. A total of 414 women with EPL consented for MVA in the treatment room under local anesthesia, out of which 400 women underwent MVA. Results: Overall MVA was 94.5% effective in treating pregnancies through 13 weeks of gestation. There were no major complications. Minor complications: retained products of conception and endometritis were treated easily. Conclusion: MVA is safe, effective and economical alternative to conventional dilatation and curettage for the treatment of EPL. Treatment in the outpatient setting allows better post-procedure physical and emotional quality of life; avoids general anesthesia, has immense potential in primary health care setting.

## Accidental Falls

#### **Cross-cultural adaptation, validity and reliability of the Arabic version of the Falls Efficacy Scale-International [FES-I]**

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**Medical Principles and Practice** 2016; 25 (1): 1-7

**Keywords:** Cross-Cultural Comparison; Reproducibility of Results; Adaptation, Physiological; Arabs; Aged

**Abstract:** Objective: The aim of this study was to evaluate the validity and reliability of an Arabic language version [Ar] of the Falls Efficacy Scale-International [FES-I] with respect to its use with Arabic-speaking elderly subjects. Subjects and Methods: For cross-cultural adaptation, the translation of the original English version of the scale was conducted based on the protocol of the Prevention of Falls Network Europe [ProFaNE]. The FES-I [Ar] was administered via face-to-face interviews to 108 community-dwelling elderly Palestinians [61 women and 47 men, aged 60-84 years]. Statistical analyses were used to determine group differences with respect to age, gender and fall history. To assess validity, Spearman's rank correlation coefficient was used to examine the correlation between the total scores of FES-I [Ar] and the Timed Up and Go [TUG] test, gait speed and balance. Test-retest reliability between the two test occasions was assessed in accordance with Svensson's method. Results: The FES-I [Ar] total scores were positively correlated with TUG [r[s] = 0.641, p < 0.001] and negatively correlated with gait speed [r[s] = -0.670, p < 0.001] and balance [r[s] = -0.592, p < 0.001]. All items of the FES-I [Ar] indicated a high percentage agreement [from 88 to 93%], and the relative position ranged from 0.01 to 0.06. Conclusion: In this study, the FES-I [Ar] was shown to be a comprehensible, valid and reliable measure of the concern about falling among community-dwelling elderly subjects. In clinical practice and future research, the FES-I [Ar] instrument could be used to effectively assess concern about falling in Arabic-speaking elderly persons.

## Accidents, Traffic

### **Declining trends in injuries and ambulance calls for road traffic crashes in Bahrain post new traffic laws of 2015**

Awadhalla, Muysar Sabri; Asokan, Govindaraj Vaithinathan; Matooq, Amina; Kirubakaran, Richard

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**Journal of Epidemiology and Global Health** 2016; 6 (2): 59-65

**Keywords:** Tertiary Care Centers; Ambulances; Wounds and Injuries; Death; Disaster Victims

**Abstract:** Road traffic crashes [RTC] are of serious global health concern. To identify whether the number of ambulance calls, injuries, and deaths has declined after the implementation of the new traffic law [NIL] 2015 in Bahrain, de-identified administrative RTC data obtained from the tertiary care center, and the General Directorate of Traffic [GDT] of Bahrain were used. A quasi-experimental design was employed to trend the impact of the NTL on RTC and associated healthcare events. Bahrainis and non-Bahrainis who met with RTC, either in a vehicle or as a pedestrian, between February 8 and May 8 in 2013, 2014 [pre NTL], and 2015 [post NTL] were included in the study. Our results show a reduction in the number of ambulance calls from vehicular and pedestrian RTC victims. The ambulance calls from pedestrian RTC victims were <10% compared to the number of ambulance calls from vehicular RTC victims. There was a significant reduction in minor injuries post 2015, whereas no obvious difference was seen for serious injuries and deaths. A longer follow-up study to confirm the sustained decline in RTC, enforcing a zero tolerance policy toward traffic transgressions and raising public awareness on the critical four minutes and golden hour is recommended.

## Acetylcysteine

### **A preliminary study: n-acetyl-L-cysteine improves semen quality following varicocelectomy**

Barekat, Foroogh; Tavalae, Marziyeh; Deemeh, Mohammad Reza; Bahreinian, Mahsa; Azadi, Leila; Abbasi, Homayoun; Rozbahani, Shahla; Esfahani Mohammad Hossein Nasr

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**IJFS-International Journal of Fertility and Sterility** 2016; 10 (1): 120-126

**Keywords:** Varicocele; Prospective Studies; Semen; Infertility, Male; Antioxidants; Oxidative Stress

**Abstract:** Background: Surgery is considered the primary treatment for male infertility from clinical varicocele. One of the main events associated with varicocele is excessive production of reactive oxygen species [ROS]. N-acetyl-L-cysteine [NAC], an antioxidant that scavenges free radicals, is considered a supplement to alleviate glutathione [GSH] depletion during oxidative stress. Despite beneficial effects of NAC in other pathological events, there is no report on the effect of NAC in individuals with varicocele. Therefore, the aim of this study is to evaluate the outcome of NAC on semen quality, protamine content, DNA damage, oxidative stress and fertility following varicocelectomy. Materials and Methods: This prospective clinical trial included 35 infertile men with varicocele randomly divided into control [n=20] and NAC [n=15] groups. We assessed semen parameters, protamine content [chromomycin A3 [CMA3]], DNA integrity [terminal deoxynucleotidyltransferase-mediated dUTP nick-end labeling [TUNEL]] and oxidative stress [2', 7'-dichlorodihydrofluorescein-diacetate [DCFH-DA]] before and three months after varicocelectomy. Results: Percentage of abnormal semen parameters, protamine deficiency, DNA fragmentation and oxidative stress were significantly decreased in both groups compared to before surgery. We calculated the percentage of improvement in these parameters compared to before surgery for each group, then compared the results between the groups. Only percentage of protamine deficiency and DNA fragmentation significantly differed between the NAC and control groups. Conclusion: The results of this study, for the first time, revealed that NAC improved chromatin integrity and pregnancy rate when administered as adjunct therapy post-varico-celectomy [Registration Number: IRCT201508177223N5].

## Acute Kidney Injury

### epidemiology

#### Frequency of acute kidney injury in patients undergoing coronary artery bypass grafting

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**JPMI-Journal of Postgraduate Medical Institute** 2016; 30 (1): 30-34

**Keywords:** Coronary Artery Bypass; Cross-Sectional Studies; Coronary Artery Disease; Risk

**Abstract:** Objective: To find the frequency of acute kidney injury in patients undergoing coronary artery bypass grafting. Methodology: The study was conducted in cardiovascular unit Lady Reading Hospital Peshawar. It was cross sectional study. Sampling technique was non probability convenient sampling. Data was collected from 20.2.2013 to 20.8.2013. Total 179 patients included in the study. All patients with known coronary artery disease were included in the study whom were planned for revascularization in the form of coronary artery bypass grafting [CABG]. Post-operatively all patients' serum creatinine till 48th post op hour was observed to detect acute kidney injury. Acute Kidney Injury [AKI] was defined as more than 50% or elevation of 0.3 mg/dl of creatinine level from base line. Results: A total of 179 patients undergoing coronary artery bypass grafting were included in the study. Average age of the patients was 46.88 years +/- 9.91 with range 20-60 years. Patients were divided into four groups according to age. The acute kidney injury after coronary artery bypass grafting was observed in 14 [7.82%] patients. Acute kidney injury was more common in old age and it was non significantly more common in male gender. Conclusion: In spite of current highly advance cardiac surgery techniques and post operative care still there is high incidence of acute kidney injury following revascularization and subsequent worst outcomes.

## Adiponectin

#### Correlation of adiponectin RNA abundance and its receptors with quantitative parameters of sperm motility in rams

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**IJFS-International Journal of Fertility and Sterility** 2016; 10 (1): 127-135

**Keywords:** RNA, Messenger; Sperm Motility; Semen; Reverse Transcriptase Polymerase Chain Reaction

**Abstract:** Background: Adiponectin and its receptors [AdipoR1 and AdipoR2], known as adiponectin system, have some proven roles in the fat and glucose metabolisms. Several studies have shown that adiponectin can be considered as a candidate in linking metabolism to testicular function. In this regard, we evaluated the correlation between sperm mRNA abundance of adiponectin and its receptors, with sperm motility indices in the present study. Materials and Methods: In this completely randomized design study, semen samples from 6 adult rams were fractionated on a two layer discontinuous percoll gradient into high and low motile sperm cells, then quantitative parameters of sperm motility were determined by computer-assisted sperm analyzer [CASA]. The mRNA abundance levels of Adiponectin, AdipoR1 and AdipoR2 were measured quantitatively using real-time reverse transcriptase polymerase chain reaction [qRT-PCR] in the high and low motile groups. Results: Firstly, we showed that adiponectin and its receptors [AdipoR1 and AdipoR2] were transcriptionally expressed in the ram sperm cells. Using Pfaff based method qRT-PCR, these levels of transcription were significantly higher in the high motile rather than low motile samples. This increase was 3.5, 3.6 and 2.5 fold change rate for Adiponectin, AdipoR1 and AdipoR2, respectively. Some of sperm motility indices [curvilinear velocity [VCL], straight-line velocity [VSL], average path velocity [VAP], linearity [LIN], wobble [WOB] and straightness [STR]] were also significantly correlated with Adiponectin and AdipoR1 relative expression. The correlation of AdipoR2 was also significant with the mentioned parameters, although this correlation was not comparable with adiponectin and AdipoR1. Conclusion: This study revealed the novel association of adiponectin system with sperm motility. The results of our study suggested that adiponectin is one of the possible factors which can be evaluated and studied in male infertility disorders.



## Adrenal Hyperplasia, Congenital

### diagnosis

#### **Congenital adrenal hyperplasia and Schmid metaphyseal chondrodysplasia in a child**

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (1): 64-66

**Keywords:** Osteochondrodysplasias-diagnosis; Child; Literature; Desoxycorticosterone

**Abstract:** Congenital adrenal hyperplasia [CAH] is a group of hereditary diseases, which are autosomal recessive. CAH occurs due to defect in one of the cortisol coding genes and often clinically presents itself with signs of androgen overproduction. In this article, we report a case of CAH and Schmid metaphyseal dysplasia. Our literature review indicated that this report is the first attempt on CYP11B1 and Schmid. dysplasia in a child. The specific diagnosis of 11-beta-hydroxylase deficiency can be determined using high basal levels of deoxycorticosterone and/or 11-deoxycortisol serums.

## Aggregatibacter actinomycetemcomitans

#### **An in vitro comparison of antimicrobial effects of curcumin-based photodynamic therapy and chlorhexidine, on aggregatibacter actinomycetemcomitans**

Najafi, Shamsoulmoulouk; Khayamzadeh, Mina; Paknejad, Mojgan; Poursepanj, Golfam; Fard, Mohammad Javad Kharazi; Bahador, Abbas

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**Journal of Lasers in Medical Sciences** 2016; 7 (1): 21-25

**Keywords:** In Vitro Techniques; Curcumin; Lasers, Semiconductor; Anti-Infective Agents; Photochemotherapy; Chlorhexidine-analogs and derivatives

**Abstract:** Introduction: Considering the importance of prevention in periodontal diseases and the important role of *Aggregatibacter actinomycetemcomitans* in induction and progression of these diseases, the aim of the present in vitro study was to compare the antimicrobial effects of chlorhexidine digluconate [CHX], curcumin and light-emitting diode [LED] laser, on this bacterium. Methods: Antimicrobial activity of curcumin [5 mg/ml], CHX [2%], LED [120 J/cm<sup>2</sup>] and LED + curcumin [120 J/cm<sup>2</sup> + 2.5 mg/ml] against *A. actinomycetemcomitans* were tested in vitro, using micro-broth dilution test. One-way analysis of variance [ANOVA] and Tukey's HSD tests served for statistical analysis. Results: Regarding the minimum inhibitory concentration [MIC], CHX had a significantly lower MIC than curcumin [P<0.05]. Sorted out by bacterial growth from lowest to highest, were CHX, LED + curcumin, curcumin, and LED groups. All the differences were found to be statistically significant [P<0.05] except for the LED group. Conclusion: We conclude that curcumin is an effective substance in preventing the growth of *A. actinomycetemcomitans*, whose impact is reinforced when used simultaneously with photodynamic therapy [PDT].

## Albuminuria

#### **Comparison of first morning void urine specimen for albumin to creatinine ratio comparing with 24-hour urinary albumin excretion in detecting microalbuminuria in type 2 diabetics**

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 240-243

**Keywords:** Creatinine; Diabetes Mellitus, Type 2; Cross-Sectional Studies; Urine Specimen Collection

**Abstract:** Objectives: To determine the accuracy of first morning void urine specimen for Albumin to Creatinine Ratio [ACR] comparing with 24-hour urinary albumin excretion in detecting trueoalbuminuria in type 2 diabetics. Study Design: Cross Sectional study. Place and Duration of Study: Military Hospital Rawalpindi, from Apr 2013 to Oct 2013. Patients and Methods: One hundred and twenty patients with type 2 Diabetes Mellitus [DM] fulfilling the inclusion criteria were included in study using consecutive. Non-probability sampling. A standard protocol was followed for

specimen collection. Urine collection was started from the next day of admission. Results: Mean random plasma glucose level was 174.54 +/- 33.06 mg/dL, mean HbA1c was 8.5 +/- 1.32%, mean urinary albumin 130.26 +/- 47.25 mg/24 hour and mean ACR was 104.30 +/- 51.56 mg/g. Area under ROC curve was 0.964 for microalbuminuria by ACR. Spearman's rank-order coefficient [rs] was 0.696 for ACR and 24 hour albumin excretion. Conclusion: ACR in first morning void urine accurately detected early microalbuminuria in type 2 diabetics

## therapy

### **Comparison of efficacy of angiotensin converting enzyme inhibitor [ACEIS] v/s angiotensin ii receptor blockers [ARBs] in management of micro albuminuria among normotensive type 2 diabetic patients**

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 258-261

**Keywords:** Angiotensin-Converting Enzyme Inhibitors; Angiotensin Receptor Antagonists-therapeutic uses; Diabetes Mellitus, Type 2; Treatment Outcome; Diabetes Complications

**Abstract:** Objective: To compare the efficacy of Angiotensin Converting Enzyme [ACEIs] v/s Angiotensin II Receptor Blockers [ARBs] in management of micro albuminuria among normotensive type 2 diabetic patients. Study Design: Randomized controlled trial. Place and Duration of Study: Department of Medicine, Combined Military Hospital, Kohat from Oct 2011 to Mar 2012. Material and Methods: A total of 356 patients [178 in each group] between 30 and 60 years of age with newly diagnosed diabetes and having microalbuminuria fulfilling the inclusion criteria were selected through consecutive sampling and were enrolled in study. Patients were divided into two groups by random sampling. Group-1 [ACEIs] received enalapril 10mg/day while group-2 [ARBs] received losartan 50mg/day. Confounding variables were excluded using exclusion criteria. Results: Mean age of the patients was 53.8 +/- 8.7 and 53.1 +/- 9.5 years in group-1 and group-2, respectively. Majority of patients in both groups were male. Efficacy was observed in 154 patients [86.5%] of group-1 and in 157 patients [88.2%] of group-2. Difference between two groups was non-significant [p>0.05]. Conclusion: ACEIs and ARBs both protect type 2 diabetic patients from developing proteinuria.

## Alveolar Bone Grafting

### methods

#### **Clinical evaluation of the use of tibial bone grafting in dentoalveolar reconstructive surgery**

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**Medical Principles and Practice** 2016; 25 (1): 72-78

**Keywords:** Alveolar Process-surgery; Tibia; Autografts; Transplantation, Autologous; Bone Transplantation; Reconstructive Surgical Procedures; Retrospective Studies

**Abstract:** Objective: The aim of this study was to evaluate the efficacy of tibial autogenous bone grafting in the treatment of patients with alveolar bone defects. Materials and Methods: The study subjects consisted of 12 patients [10 male, 2 female, age: 19-51 years] who underwent reconstructive autogenous bone-grafting procedures. The medial approach to the tibial bone was used to harvest autogenous cancellous bone grafts in all the patients. Clinical parameters [complications at the donor and recipient sites, resorption and volume of the grafts] were evaluated retrospectively. Results: The mean age of the patients was 36.25 +/- 0.9 years. Of the 12 patients, 5 [41.7%] received bone grafts for sinus augmentation, 3 [25%] for cyst cavity reconstruction and 4 [33.3%] for alveolar cleft reconstruction procedures. The average follow-up period was 28.4 months [range: 21-40 months]. An average of 5.2 cm<sup>3</sup> of cancellous bone was harvested for grafting procedures. All the grafting procedures were successful, and there were no surgical complications during the harvesting protocol. In all cases, pain and gait disturbance lasted less than 2 weeks. Conclusion: The results of this study suggest that the use of tibial autogenous bone graft harvested using a medial approach was a safe, simple and effective method for grafting various alveolar bone defects where high amounts of cancellous bone grafts were needed with low morbidity.

## Amikacin

### blood

#### **Usage pattern and serum level measurement of amikacin in the internal medicine ward of the largest referral hospital in the south of Iran: a pharmacoepidemiological study**

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (3): 191-199

**Keywords:** Internal Medicine; Cross-Sectional Studies

**Abstract:** Background: The inappropriate use of aminoglycosides has harmful effects such as the development of resistant pathogens and the incidence of nephrotoxicity and ototoxicity. Therefore, drug utilization evaluation of these drugs may improve their usage remarkably. The aim of this study was to assess the usage pattern of amikacin in an internal medicine ward. Methods: This cross-sectional study was conducted in the Internal Medicine Ward of Nemazee Teaching Hospital, Shiraz, Iran, in 2011. The guideline for amikacin use was approved by the institutional Pharmacy and Therapeutics Committee, and the study criteria were developed to assess several parameters involved in amikacin therapy such as appropriateness of drug use, dosage, duration of therapy, toxicity monitoring, and serum concentration assay. Serum concentration was assayed using a Cobas Mira Auto Analyzer. Clinical and paraclinical parameters such as glomerular filtration rate, culture, microbial sensitivity, white blood cell count, and fever were collected. Results: Sixty-three patients were evaluated. Fifty-seven percent of the patients needed dose readjustment; however, it was not performed for 89% of them. Culture between 48 and 72 hours after amikacin administration was not controlled for 79% of the patients. In 19% of the patients, optimum therapeutic effect was not achieved. The mean  $\pm$  SD of the trough and peak concentrations was 7.63  $\pm$  5.4 microg/mL and 15.67  $\pm$  7.79 microg/mL, respectively. Forty-five percent of the trough and 38% of the peak levels were within the therapeutic range. The overall adherence of amikacin usage to the guideline was only 48%. Conclusion: To achieve appropriate treatment and prevent toxic effects, we recommend that pharmacokinetic dosing methods, amikacin guideline, and serum monitoring be considered.

## Amyloid Neuropathies, Familial

#### **Familial amyloid polyneuropathy type IV [finnish] with rapid clinical progression in an iranian woman: a case report**

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (3): 241-244

**Keywords:** Cranial Nerves; Hypotension, Orthostatic

**Abstract:** Familial amyloid polyneuropathy [FAP] type IV [FINNISH] is a rare clinical entity with challenging neuropathy and cosmetic deficits. Amyloidosis can affect peripheral sensory, motor, or autonomic nerves. Nerve lesions are induced by deposits of amyloid fibrils and treatment approaches for neuropathy are challenging. Involvement of cranial nerves and atrophy in facial muscles is a real concern in daily life of such patients. Currently, diagnosis of neuropathy can be made by electrodiagnostic studies and diagnosis of amyloidosis can be made by genetic testing or by detection of amyloid deposition in abdominal fat pad, rectal, or nerve biopsies. It is preferable to consider FAP as one of the differential diagnosis of a case presented with multiple cranial nerves symptoms. The authors present a case of familial amyloid polyneuropathy [FAP] type IV with severe involvement of multiple cranial nerves, peripheral limb neuropathy, and orthostatic hypotension.

## Arbovirus Infections

#### **Arboviral diseases in the EMR and the threat of ZIKV transmission**

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World Health Organization. Regional Office for the Eastern Mediterranean - Communicable Diseases Prevention and Control - Pandemic and Epidemic Diseases

**Weekly Epidemiological Monitor** 2016; 09 (08): 1

**Keywords:** Zika Virus Infection; Zika Virus Infection-transmission; Mediterranean Region; Chikungunya Fever; Dengue; Yellow Fever; Aedes

**Abstract:** With the recent declaration of reported clusters of microcephaly and other neurological disorders, suspected to be associated with Zika virus [ZIKV] transmission, as a public health emergency of international concern [PHEIC], the focus has now been on the arboviruses transmitted by the same Aedes mosquitoes in the past.

## Arbutin

### Effects of arbutin on radiation-induced micronuclei in mice bone marrow cells and its definite dose reduction factor

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (3): 180-185

**Keywords:** Gamma Rays; Radiation-Protective Agents; Bone Marrow Cells; Micronucleus Tests; Erythrocytes; Mice

**Abstract:** Background: Interactions of free radicals from ionizing radiation with DNA can induce DNA damage and lead to mutagenesis and carcinogenesis. With respect to radiation damage to human, it is important to protect humans from side effects induced by ionizing radiation. In the present study, the effects of arbutin were investigated by using the micronucleus test for anti-clastogenic activity, to calculate the ratio of polychromatic erythrocyte to polychromatic erythrocyte plus normochromatic erythrocyte [PCE/PCE+NCE] in order to show cell proliferation activity. Methods: Arbutin [50, 100, and 200 mg/kg] was intraperitoneally [ip] administered to NMRI mice two hours before gamma radiation at 2 and 4 gray [Gy]. The frequency of micronuclei in 1000 PCEs [MnPCEs] and the ratio of PCE/PCE+NCE were calculated for each sample. Data were statistically evaluated using one-way ANOVA, Tukey HSD test, and t-test. Results: The findings indicated that gamma radiation at 2 and 4 Gy extremely increased the frequencies of MnPCE [P<0.001] while reducing PCE/PCE+NCE [P<0.001] compared to the control group. All three doses of arbutin before irradiation significantly reduced the frequencies of MnPCEs and increased the ratio of PCE/PCE+NCE in mice bone marrow compared to the non-drug-treated irradiated control [P<0.001]. All three doses of arbutin had no toxicity effect on bone marrow cells. The calculated dose reduction factor [DRF] showed DRF=1.93 for 2Gy and DRF=2.22 for 4 Gy. Conclusion: Our results demonstrated that arbutin gives significant protection to rat bone against the clastogenic and cytotoxic effects of gamma irradiation.

## Arteriovenous Fistula

### Arteriovenous access in children

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 285-289

**Keywords:** Renal Dialysis; Cross-Sectional Studies; Child; Vascular Patency

**Abstract:** Objective: To evaluate arteriovenous access [AVA] in children for patency and to compare our results with other studies. Study Design: Cross sectional descriptive study. Place and Duration of Study: Combined Military Hospital Rawalpindi and Combined Military Hospital Lahore, from 1[st] August 2005 to 15[th] June 2011. Patients and Methods: Total 35 AVA patients were included in the study. Record was made of age, weight, gender, physical examination of vein, findings of duplex venous mapping, plan of AVA and procedure performed. Twenty nine cases [82.8%] were already undergoing hemodialysis. Thirty [85.7%] cases were operated under general anesthesia and only 5 [14.2%] under local anesthesia. All end-to-side fistulae were made. Meticulous microsurgical technique was used. Patients were examined on 1st, 2nd and 10th postoperative days, and then every month for at least 12 months. Primary failure, complications and revision procedures were recorded. SPSS version 19.00 was used for statistical analysis. Primary and secondary patencies were calculated. Kaplan - Meier curve was used to express both primary and secondary patency. Results: Out of 35 AVA, 20 [57.1%] radiocephalic [RCAVA], 11[31.4%] brachiocephalic [BCAVA] and 4 [11.4%] brachiobasilic [BBAVA] were made. Three [8.5%] AVA thrombosed within 48 hours. Thrombectomy was done in all but only one [2.8%] was saved. Six [17.1%] presented with failure within next 6 months [4 RCAVA and 2 BCAVA]. Only 1 [2.8%] RCAVA was saved. One RCAVA, BCAVA and BBAVA each presented with failure between 6 and 12 months. Again 1 RCAVA was saved. Primary failure occurred in 4 [11.4%] patients. Primary patency rate at 6 months and 12 months was 74.2% and 65.7% respectively while secondary patency rate was 80% and 74.2% at 6 and 12 months respectively. Conclusion: Primary and secondary patency rates of AVA in children in our study were comparable to most of the similar studies

## Aspirin

### pharmacology

#### **Effect of aspirin on spinal cord injury: an experimental study**

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (3): 217-222

**Keywords:** Spinal Cord Injuries; Rats, Wistar; Antioxidants

**Abstract:** Aspirin is an anti-inflammatory drug, peroxy radical scavenger, and antioxidant agent that inhibits phospholipases, nitric oxide synthetases, and cyclooxygenase enzymes. The existing literature contains no studies on the effects of various doses of aspirin on spinal cord injury [SCI]. Therefore, we sought to investigate the putative effects of aspirin on experimental SCI. The weight-drop injury model was used to produce SCI in 100 albino Wistar rats. The animals were allocated to five groups: a control group, where the rats did not undergo any surgical or medical intervention except for anesthesia; a sham-treated group, where laminectomy was performed without SCI and no further therapy was administered; and three other groups, where the rats with SCI received low-dose aspirin [20 mg/kg], high-dose aspirin [80 mg/kg], and a vehicle, respectively. Half of the rats were sacrificed 24 hours later, and their spinal cords were excised for biochemical studies. The other rats were subjected to Basso, Beattie, and Bresnahan [BBB] locomotor rating scale scoring once a week for 6 consecutive weeks. Aspirin decreased lipid peroxidation following SCI as the mean  $\pm$  [ standard error] catalase level was significantly higher in the high-dose aspirin group [46.10  $\pm$  12.01] than in the sham-treated group [16.07  $\pm$  2.42] and the vehicle-treated group [15.31  $\pm$  3.20] [P<0.05; P<0.05, respectively]. Both of the groups treated with high-dose and low-dose aspirin demonstrated a higher mean BBB score than did the control group [P<0.001] and the sham-treated group [P<0.001]. Our data provide evidence in support of the potential effects of aspirin in biochemical and neurobehavioral recovery after SCI.

## Azadirachta

#### **Adulticidal efficacy of azadirachta indica [Neem Tree], sesamum indicum [Til] and pinus sabinana [Pine Tree] extracts against aedes aegypti under laboratory conditions**

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**PJMR-Pakistan Journal of Medical Research** 2016; 55 (1): 11-15

**Keywords:** Plant Proteins; Calcium-Binding Proteins; Pinus; Plant Extracts; Plant Oils; Aedes-drug effects

**Abstract:** Background: Emergence of resistance to insecticides against mosquitoes and other disease vectors has prompted the need for alternate sources of mosquito control which are more target-specific, easily bio-degradable and effective against mosquitoes. Materials and Methods: The adulticidal efficacy of crude Neem oil extract, Pine oil extract and Til oil extract with five different concentrations i.e. 2%, 4%, 6%, and 8% was tested against five to six days old sugar fed female *Aedes aegypti* using standard WHO Bioassay test kit. The percentage mortality was observed after 24 and 48 hours under laboratory condition. Results: The LC[50] [Lethal Concentration] values of Neem oil extract against adults of *Aedes aegypti* were 1.17 ml and 0.09 ml after 24 and 48 hours of exposure respectively, while the LC[99] were 4.27 ml and 1.17 ml after 24 and 48 hours of exposure respectively. The LC[50] values of Pine oil extract after 24 and 48 hours were 0.25 and, 0.06 ml respectively, while LC[99] values at 24 and 48 hour were 0.89 ml and 0.64 ml respectively. The LC[50] values of Til oil extract after 24 and 48 hours of exposure were 1.17 ml and 0.05 ml respectively while LC99 values were 4.18 ml and 1.28 ml after 24 and 48 hours of exposure respectively. The LC[50] and LC[90] values were indicative that the plant extracts were highly toxic after 48 hours of exposure. Among the tested plant oil extracts the maximum adulticidal efficacy was observed in the pine oil extract. No mortality was observed in controls. Conclusion: Crude extract of Pine oil was more effective against *Aedes aegypti* as compared to Neem and Til oil.

## Baccharis

### **Antibacterial activity of Baccharis dracunculifolia in planktonic cultures and biofilms of Streptococcus mutans**

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**Journal of Infection and Public Health** 2016; 9 (3): 324-330

**Keywords:** Streptococcus mutans; Biofilms; Dental Caries; Anti-Bacterial Agents

**Abstract:** Streptococcus mutans is an important cariogenic microorganism, and alternative methods for its elimination are required. Different concentrations of Baccharis dracunculifolia essential oil [EO] were tested to determine its minimal inhibitory concentration [MIC] in planktonic cultures, and this concentration was used in S. mutans biofilms. Additionally, we assessed the effect of a 0.12% chlorhex-idine [CHX] and saline solution in S. mutans biofilms. The biofilms were grown in discs of composite resin for 48 h and exposed to B. dracunculifolia, CHX or saline solution for 5min. The viability of the biofilms was determined by counting the colony-forming units per milliliter [CFU/ml] in agar, which was statistically significant [ $P < 0.05$ ]. The MIC of the B. dracunculifolia EO to planktonic growth of S. mutans was 6%. In biofilms of S. mutans clinical isolates, B. dracunculifolia EO [6%] and CHX resulted in reductions of 53.3-91.1% and 79.1-96.6%, respectively. For the biofilm formed by the S. mutans reference strain, the reductions achieved with B. dracunculifolia EO and CHX were, respectively, 39.3% and 88.1%. It was concluded that B. dracunculifolia EO showed antibacterial activity and was able to control this oral microorganism, which otherwise causes dental caries.

## Bacterial Infections

### **epidemiology**

#### **Prevalence of polybacterial infection and antimicrobial susceptibility of wound samples from different wards**

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**Journal of Gorgan University of Medical Sciences** 2016; 18 (1): 120-127

**Keywords:** Wounds and Injuries; Prevalence; Microbial Sensitivity Tests

**Abstract:** Background and Objective: Wound infection treatment, particularly in chronic and bacterial poly cases, is difficult and entails heavy costs. This study was done to determine the prevalence of poly bacterial infection and antimicrobial susceptibility of wound samples from different wards. Methods: In this descriptive study, wound sampling was prepared from 336 patients admitted to different wards of Baqiyatallah Hospital in Tehran, Iran. Identification was performed based on biochemical tests including oxidase test, TSI, IMVIC, lysine decarboxylase, phenylalanine deaminase, urea, motility, catalase, coagulase, mannitol fermentation, optochin sensitivity, susceptibility to bacitracin and sulfamethoxazole, growth in Bile esculin and DNase production. Antibiotic resistance pattern of isolates was determined using disk diffusion method for 14 important antibiotics. Results: 294 samples were positive for bacterial culture, from which 364 isolates including 11 different isolates were obtained. Out of 294 positive samples, 245 samples were mono bacterial and 54 were poly bacterial including two-bacterial [45 samples], three-bacterial [7 samples], and four-bacterial [2 samples]. 5. aureus [29.7%], Enterococci [15.6%], and E. coli [15.6%] were the most prevalent isolates. 5. aureus-Enterococci pattern was the most common two-bacterial pattern [33%], and majority of polybacterial patterns belonging to gram negative bacteria was in surgery ward [32.5%]. Antibigram results showed high levels of antibiotic resistance in the isolates. Imipenem and amikacin were the most effective antibiotics against Gram negative isolates, and vancomycin for Gram positive isolates. Also, 71% of 5. aureus isolates were resistant to oxacillin. Conclusion: Variation of bacterial isolates was similar to other studies. Most of poly-bacterial wound infections were due to common nosocomial pathogens and their high rates of antibiotic resistance are extremely alarming.

## Bezoars

### complications

#### **Trichobezoar causing gastric perforation: a case report**

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (1): 67-70

**Keywords:** Stomach-injuries; Trichotillomania; Laparotomy; Adolescent; Peritonitis; Endoscopy

**Abstract:** Trichobezoars are impactions of swallowed hairs in the stomach and occasionally in the intestine. They occur in emotionally disturbed, depressed, or mentally retarded patients who have trichotillomania and trichophagia. Trichobezoars are usually diagnosed on CT scan or upper GI endoscopy. They can give rise to complications like gastroduodenal ulceration, haemorrhage, perforation, peritonitis, or obstruction, with a high rate of mortality. The treatment is endoscopic, laparoscopic, or surgical removal and usually followed by psychiatric opinion. Herein, we report a case of gastric trichobezoar presenting as gastric perforation in a patient of trichotillomania and trichophagia that was accidentally found on laparotomy. As the patient was in shock on admission, relevant history of trichophagia could not be elicited. Henceforth, she was operated for perforation peritonitis. Trichobezoar was discovered intraoperatively and removed. The perforation was repaired with Graham's omental patch. Postoperatively, history of trichophagia was corroborated with scarring alopecia of scalp. Trichobezoars is usually seen in adolescent girls, often with an underlying psychiatric or social problem. Laparotomy is the gold standard treatment. Surgical treatment should be followed by behavioral and psychiatric treatment. The patient should be vigilantly monitored for this impulsive disorder, as recurrences are common.

## Bile Ducts

### injuries

#### **Bile duct injuries and outcomes: a retrospective medical record review**

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 185-189

**Keywords:** Cholecystectomy; Postoperative Complications; Morbidity; Retrospective Studies

**Abstract:** Objective: To report on our experience of cholecystectomy associated bile duct injuries and observe factors influencing outcomes. Study Design: Simple descriptive study. Place and Duration of Study: Surgical unit IV, Military Hospital [MH] Rawalpindi, over a period of seven years from 01-01-2005 to 1-12-2012. Material and Methods: Eighty eight patients who underwent repair of bile duct injuries during this period were included in this study. Patients referred from class 'W and 'C' hospitals to our institute were also included. Results: Fifteen immediate repairs [0-72 hours] post cholecystectomy, forty eight intermediate repairs [72hrs-6wks] and twenty five late repairs [> 6 wks] were performed [table-1]. Short term morbidity was higher in patients with upper biliary tract injury [p=.04]. The most common long-term complication was biliary stricture, which occurred in 28 patients [31.8%]. Patients with bile duct injuries [BDIs] repaired in intermediate period were more prone to develop stricture of biliary tree than those repaired in immediate or late period [p=.03] [table 3]. Long term morbidity was also higher in patients who presented with bile contamination of peritoneum [p=.03] and had sustained complex biliary tract injuries [E4/E5] [p=.03]. The overall morbidity and mortality rate was 31% and 3% respectively. Conclusion: We observed that complex hilar injury, presence of intra-abdominal bile and timing of BDI repair is an important predictor of long-term outcome. Injuries repaired in early [0-72hrs] or late period [>6wks] were less likely to develop biliary stricture as compared to injuries repaired in intermediate period [72hrs-6wks]. Moreover complex hilar injuries and intra-abdominal bile at presentation increases the possibility for development of late biliary stricture.

## Blood Donors

### **Seroprevalence of transfusion transmissible infections in blood donors: a three year experience**

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 190-193

**Keywords:** Seroepidemiologic Studies; Blood Transfusion; Infection

**Abstract:** Objective: To determine seroprevalence of transfusion transmissible infections [TTIs] in blood donors and to compare the present results with the data from studies conducted in past. Study Design: Descriptive study. Place and Duration of Study: Armed Forces Institute of Transfusion [AFIT], Rawalpindi from January 2010 to December 2012. Material and Methods: All the blood donors who had donated blood at AFIT during the three year study period were included. Prior to blood donation at the institute, all the donors were subjected to a preset, structured questionnaire to determine their eligibility for donation as per the criteria set by the institute. Donors' serum samples were screened for hepatitis B virus [HBV], hepatitis C virus [HCV], human immunodeficiency virus [HIV] and syphilis by using HBsAg, anti-HCV, HIV. antigen-antibody combination assay and syphilis antibody test, respectively. The repeatedly reactive samples were considered as true reactive. Results: A total 160552 blood donors were screened during the study period. The mean age of the donors was 29 +/- 10.2 years [Range: 18 - 60 years]. Out of these, 158144 [98.5%] were male donors and 2408 [1.5%] were female donors. 7385 [4.6%] donors were volunteer and 153167 [95.4%] donors the replacement donors. The seroprevalence of TTIs in the donors for HBV, HCV, HIV and syphilis was 2385 [1.48%], 4194 [2.61%], 26 [0.02%] and 1520 [0.95%], respectively. The seroprevalence of HBV was higher and statistically significant [p value<0.05] in Gp-II [31-45 years] and the seroprevalence of both HCV and Syphilis was higher and statistically significant [p value <0.05] in both GP-II [31-45 years] and GP-III [46 years and above] when compared with overall seroprevalence of the respective infections in all age groups. Conclusion: This study highlights that the seroprevalence of HBV and HCV is decreasing in our blood donors, but still it is an important risk factor for spread of these infections. The seroprevalence of HIV is rising gradually in the blood donors.

## Bone Density

### **Bone mineral density in Egyptian children with familial mediterranean fever**

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (1): 2-8

**Keywords:** Familial Mediterranean Fever; Child; Cross-Sectional Studies; Genes; Mutation; Femur

**Abstract:** Background: Familial Mediterranean fever [FMF] has episodic or subclinical inflammation that may lead to a decrease in bone mineral density [BMD]. The objective of this study was to assess BMD in Egyptian children with FMF on genetic basis. Methods: A cross sectional study included 45 FMF patients and 25 control children of both sexes in the age range between 3-16 years old. The patients were reclassified into two groups, namely group I[A] with 23 cases using colchicine for 1 month or less, and group I[B] with 22 cases using colchicine for more than 6 months. For both the patients and control groups, MEFV mutations were defined using molecular genetics technique and BMD was measured by DXA at the proximal femur and lumbar spines. Results: Four frequent gene mutations were found in the patient group E148Q [35.6%], V726A [33.3%], M680I [28.9%], and M694V [2.2%]. There were also four heterozygous gene mutations in 40% of the control children. Patients receiving colchicine treatment for less than 1 month had highly significant lower values of BMD at the femur and lumbar spines than the control children [P=0.007, P<0.001]. Patients receiving colchicine treatment for more than 6 months had improved values of BMD at femur compared with the control, but there were still significant differences between them in lumbar spine [P=0.036]. There were insignificant effect of gene mutation type on BMD and the risk of osteopenia among the patients. Conclusion: FMF had a significant effect on BMD. However, regular use of colchicine treatment improves this effect mainly at the femur.



## Boron

### therapeutic uses

#### **Boron induces early matrix mineralization via calcium deposition and elevation of alkaline phosphatase activity in differentiated rat bone marrow mesenchymal stem cells**

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**Cell Journal [Yakhteh]** 2016; 18 (1): 62-73

**Keywords:** Alkaline Phosphatase; Mesenchymal Stromal Cells; Rats, Wistar; Bone Marrow; Boric Acids

**Abstract:** Objective: Boron [B] is essential for plant development and might be an essential micronutrient for animals and humans. This study was conducted to characterize the impact of boric acid [BA] on the cellular and molecular nature of differentiated rat bone marrow mesenchymal stem cells [BMSCs]. Materials and Methods: In this experimental study, BMSCs were extracted and expanded to the 3rd passage, then cultured in Dulbecco's Modified Eagle's Medium [DMEM] complemented with osteogenic media as well as 6 ng/ml and 6 µg/ml of BA. After 5, 10, 15 and 21 days the viability and the level of mineralization was determined using MTT assay and alizarin red respectively. In addition, the morphology, nuclear diameter and cytoplasmic area of the cells were studied with the help of fluorescent dye. The concentration of calcium, activity of alanine transaminase [ALT], aspartate transaminase [AST], lactate dehydrogenase [LDH] and alkaline phosphatase [ALP] as well as sodium and potassium levels were also evaluated using commercial kits and a flame photometer respectively. Results: Although 6 microg/ml of BA was found to be toxic, a concentration of 6 ng/ml increased the osteogenic ability of the cell significantly throughout the treatment. In addition it was observed that B treatment caused the early induction of matrix mineralization compared to controls. Conclusion: Although more investigation is required, we suggest the prescription of a very low concentration of B in the form of BA or foods containing BA, in groups at high risk of osteoporosis or in the case of bone fracture.

## Camellia sinensis

#### **Effect of green tea extract [Camellia sinensis] on kidney toxicity induced by sodium arsenite: a stereological study**

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**Journal of Gorgan University of Medical Sciences** 2016; 18 (1): 30-38

**Keywords:** Plant Extracts; Kidney Diseases; Antioxidants; Sodium Compounds; Arsenites-toxicity; Mice

**Abstract:** Background and Objective: Sodium Arsenite is an environmental pollutant which can generate free radicals causing tissue damage. This study was done to evaluate the effect of Green Tea [GTE], as a strong antioxidant, on kidney tissue in mice treated with Sodium Arsenite. Methods: In this experimental study 24 adult male NMRI mice were randomly allocated into four groups including: control, GTE [100mg/kg/day], Sodium Arsenite [5mg/kg/day] and Sodium Arsenite + GTE, for 34 days, orally. Animals were scarified and left kidney was taken out, fixed, sectioned, processed and stained using Heidenhain'azan method. Using stereological technique the total volume of kidney, volume of cortex, medulla, proximal and distal tubule, renal corpuscle, gelomerulus, tuft and capillary, membrane and space of Bowman's capsule and length of proximal and distal tubule were determined. Creatinine, BUN and MDA serum samples were measured. Results: The mean of total volume of cortex, proximal tubule, distal tubule, renal corpuscle and gelomerolus, taft, Bowman's capsule space, size of epithelium and lumen of proximal and distal tubule were significantly reduced in Sodium Arsenite group compared to control [P<0.05]. These parameters were significantly increased in the Sodium Arsenite + GTE group in comparison with Sodium Arsenite group [P<0.05]. The creatinine, Blood urea nitrogen [BUN] and MDA were significantly increased in the Sodium Arsenite group in compared to the control group [P<0.05]. These parameters were significantly reduced in the Sodium Arsenite + GTE group in comparison with Sodium Arsenite group [P<0.05]. Conclusion: Green tea has a protective role in Sodium Arsenite induced nephrotoxicity.

## Carcinogens

### **Environmental carcinogen exposure and lifestyle factors affecting cancer risk in Qatar: findings from a qualitative review**

Denholm, R.; Schuz, J.; Straif, K.; Ali, F.M.H.; Bonas, F.; Gjbrea, O.; Sifton, C.; Olsson, A.C  
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**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (3): 219-227

**Keywords:** Neoplasms; Risk Factors; Life Style; Environmental Pollution

**Abstract:** To meet the country's health goals for 2011-2016, a qualitative review of exposure to risk factors for cancer in Qatar was conducted in 2013. The review included exposure to environmental agents carcinogenic to humans [International Agency for Research on Cancer classification], as well as lifestyle factors known to affect cancer risk. Information from all available sources was assembled and reviewed. The levels of particulate matter reported in Qatar were in the upper range of ambient air pollutants reported internationally, and may influence the country's future lung cancer burden. The limited data on occupational exposure suggests that the greatest risks for workers in the construction industry are likely to be from environmental dust and related air pollutants. The greatest cancer risks for Qatari nationals may be lifestyle factors, particularly obesity, physical inactivity and tobacco use. Extended monitoring of the composition of and human exposure to air pollutants is recommended.

## Carotenoids

### **Crocin improves damage induced by nicotine on a number of reproductive parameters in male mice**

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**IJFS-International Journal of Fertility and Sterility** 2016; 10 (1): 71-78

**Keywords:** Nicotine-adverse effects; Mice; Fertility; Antioxidants; Spermatozoa

**Abstract:** Background: Crocin, a carotenoid isolated from *Crocus sativus* L. [saffron], is a pharmacologically active component of saffron. Nicotine consumption can decrease fertility in males through induction of oxidative stress and DNA damage. The aim of this study is to determine the effects of crocin on reproductive parameter damages in male mice exposed to nicotine. Materials and Methods: In this experimental study, we divided 48 mice into 8 groups [n=6 per group]: control [normal saline], nicotine [2.5 mg/kg], crocin [12.5, 25 and 50 mg/kg] and crocin [12.5, 25 and 50 mg/kg]+nicotine [2.5 mg/kg]. Mice received once daily intraperitoneal injections of crocin, nicotine and crocin+nicotine for 4 weeks. Sperm parameters [count, motility, and viability], testis weight, seminiferous tube diameters, testosterone, and serum nitric oxide levels were analyzed and compared. Results: Nicotine administration significantly decreased testosterone level; sperm count, viability, and motility; testis weight and seminiferous tubule diameters compared to the control group [P<0.05]. However, increasing the dose of crocin in the crocin and crocin+nicotine groups significantly boosted sperm motility and viability; seminiferous tubule diameters; testis weight; and testosterone levels in all groups compared to the nicotine group [P<0.05]. Conclusion: Crocin improves nicotine-induced adverse effects on reproductive parameters in male mice.

## Carotid Artery Diseases

### **Carotid atherosclerosis; prevalence in obese patients having hepatic steatosis and its effect on the development of MI**

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**Professional Medical Journal-Quarterly [The]** 2016; 23 (1): 39-44

**Keywords:** Obesity; Fatty Liver; Cross-Sectional Studies; Myocardial Infarction

**Abstract:** Objectives: To determine the frequency of carotid atherosclerosis in obese patients having hepatic steatosis and its effect on the development of MI. Design: Cross sectional study. Setting: Department of Radiology Allied Hospital, Faisalabad. Period: From January 2012 to June 2013. Patients and Method: A total of 96 patients were included in this study. LOGIC 5 Doppler ultrasound machine was used. B-mode ultrasonography of common carotid arteries was performed on both sides with a 7.5 MHz linear array transducer. Ultrasound was done in supine position

and elevation of chest by pillow. Patient head will be turned to the opposite side. Intima media thickness was accessed in the distal wall of common carotid artery of both sides 1.0 cm proximal to carotid bulb. Results: Mean age of the patients was 46.69 +/- 11.86 years. Out of 96 patients, 51 [53.1%] were males while remaining 45 patients [46.9%] were females. Presence of carotid atherosclerosis was noted in 96 patients [100.0%]. Out of these patients, myocardial infarction was present in 81 patients [84.4%]. Mean BMI was 30.67 +/- 0.47, mean weight was 91.86 +/- 7.57 Kg and intima media thickness was 0.84 +/- 0.12 mm. Conclusion: Prevalence of atherosclerotic changes in carotid arteries detected by Doppler ultrasound among obese patients having hepatic steatosis and its effect on the development of MI is remarkable.

## Carum

### **Anticonvulsant effect of the aqueous extract and essential oil of carum carvi L. seeds in a pentylenetetrazol model of seizure in mice**

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (3): 200-208

**Keywords:** Anticonvulsants; Seizures; Plant Extracts; Pentylenetetrazole; Mice

**Abstract:** Background: Carum carvi L. [caraway], known as black zeera in Iran, has been indicated for the treatment of epilepsy in Iranian folk medicine. This study evaluated whether the aqueous extract and essential oil of caraway seeds have anticonvulsant effects in mice. Methods: The anticonvulsant effects of the aqueous extract [200, 400, 800, 1600, and 3200 mg/kg, i.p.] and essential oil [25, 50, 100, 200, and 400 mg/kg, i.p.] of caraway were assessed using pentylenetetrazol [PTZ; 95 mg/kg i.p.] induced convulsions. Diazepam [3 mg/kg] was used as positive control. The latency time before the onset of myoclonic, clonic, and tonic convulsions and the percentage of mortality were recorded. In addition, the effect of caraway on neuromuscular coordination was evaluated using the rotarod performance test. Results: The extract and essential oil dose-dependently increased the latency time to the onset of myoclonic [ED<sub>50</sub>, 1257 and 62.2 mg/kg, respectively] and clonic [ED<sub>50</sub>, 929 and 42.3 mg/kg, respectively] seizures. The extract and essential oil of caraway prevented the animals from tonic seizure with ED<sub>50</sub>s of 2142.4 and 97.6 mg/kg, respectively. The extract and essential oil of caraway protected 28.6 and 71.4% of the animals from PTZ-induced death, respectively, and had no significant effect on neuromuscular coordination. Conclusion: This study showed that the aqueous extract and essential oil of caraway had anticonvulsant properties. However, the essential oil was more potent and effective than was the aqueous extract as an anticonvulsant. Additionally, the anticonvulsant effect of caraway was not due to a muscle relaxant activity. These findings support the acclaimed antiepileptic effect of caraway in folk medicine and propose its potential use in petit mal seizure in humans.

## Cerium

### **pharmacology**

#### **Nanoceria attenuated high glucose-induced oxidative damage in hepg2 cells**

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**Cell Journal [Yakhteh]** 2016; 18 (1): 97-102

**Keywords:** Hyperglycemia; Antioxidants; Oxidative Stress; Hep G2 Cells; Reactive Oxygen Species; Lipid Peroxidation; Glutathione

**Abstract:** Objective: Hyperglycemia, a common metabolic disorder in diabetes, can lead to oxidative damage. The use of antioxidants can benefit the control and prevention of diabetes side effects. This study aims to evaluate the effect of nanoceria particles, as an antioxidant, on glucose induced cytotoxicity, reactive oxygen species [ROS], lipid peroxidation [LPO] and glutathione [GSH] content in a human hepatocellular liver carcinoma cell line [HepG2] cell line. Materials and Methods: In this experimental study, we divided HepG2 cells into these groups: i. Cells treated with 5 mM D-glucose [control], ii. Cells treated with 45 mM D-mannitol+ 5 mM D-glucose [osmotic control], iii. Cells treated with 50 mM D-glucose [high glucose], and iv. Cells treated with 50 mM D-glucose+nanoceria. Cell viability, ROS formation, LPO and GSH were measured and analyzed statistically. Results: High glucose [50 mM] treatment caused significant cell death and increased oxidative stress markers in HepG2 cells. Interestingly, nanoceria at a concentration of 50 mM significantly decreased the high glucose-induced cytotoxicity, ROS formation and LPO. This concentration of

nanoceria increased the GSH content in HepG2 cells [P<0.05]. Conclusion: The antioxidant feature of nanoceria particles makes it an attractive candidate for attenuation of hyperglycemia oxidative damage in different organs.

## Cervix Uteri

### pathology

#### **Is cryotherapy friend or foe for symptomatic cervical ectopy?**

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**Medical Principles and Practice** 2016; 25 (1): 8-11

**Keywords:** Choristoma; Cryotherapy; Uterine Cervicitis; Pelvic Pain; Cross-Sectional Studies

**Abstract:** Objective: To evaluate the success rates and clinical outcomes of cervical cryotherapy applied to cervical ectopy for symptomatic relief. Subjects and Methods: A total of 124 women who underwent cryotherapy for symptomatic treatment of cervical ectopy were included in this study. Indications for treatment were: abundant leucorrhoea [n = 114], post-coital bleeding [n = 22], recurrent cervicitis [n = 30] and pelvic pain [n = 12]. Cryotherapy consisted of the use of carbon dioxide at -89[degree]C to destroy the ectopic columnar epithelium by freezing, and it was transmitted to the ectopy through a flat cryoprobe. No routine anaesthesia or analgesia was administered. All patients were questioned about the status of their symptoms after 6 weeks of treatment. Results: The highest success rate was obtained in patients with abundant leucorrhoea [n = 102; 89.5%], while the lowest success rate was achieved in subjects with pelvic pain [n = 7; 58%]. After treatment, no severe complications were observed, except for hydrorrhoea for a few days. Success rates were 9 times lower in patients who had 3 or more cervicitis episodes per 6 months. Conclusion: In this study, the success rate of cryotherapy was highest in patients with abundant leucorrhoea and lowest in patients with pelvic pain and recurrent cervicitis. Hence, we recommend that clinicians perform the procedure in such patients without much delay.

## Child Abuse

#### **Effect of therapeutic intervention on general health of child abused mothers**

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**Journal of Gorgan University of Medical Sciences** 2016; 18 (1): 1-7

**Keywords:** Health; Mothers; Depression; Anxiety; Surveys and Questionnaires; Parents

**Abstract:** Background and Objective: Child abuse is a common phenomenon with variety of reasons; the most important one is mother psychiatric disorders. Concurrent interventions in the family can recover the mother and reduce child abuse. This study was done to evaluate the effect of therapeutic intervention on general health of child abused mothers. Methods: This clinical trial study was conducted on 57 children and their child abused mothers whom referred to child psychiatry and pediatric department of Imam Hossien hospital, Tehran, Iran during November 2009-April 2010. Children and their families were visited by a psychiatrist and depend on the child and the family after either pharmaceutical or psychological interventions was taken. Parent management training was done for all mothers in 8 weekly sessions. General health questionnaire were filled by mothers before intervention in the third and sixth months following the intervention. Results: Total score of general health, depression and anxiety of child abused mothers were 31.3 +/- 1.90, 5.26 +/- 0.66, 8.10 +/- 0.46, respectively. It was significantly increased after six. months intervention in comparison with pre-intervention [37.3 +/- 2.34, 7.48 +/- 0.72, 10.44 +/- 0.58, respectively]. Conclusion: Appropriate therapeutic intervention and parent management training for mothers can improve general health of child abused mothers.

## Child Health

### **Improved water and child health in Egypt: impact of interrupted water supply and storage of household water on the prevalence of diarrhoea**

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Population Council - Egypt Country Office

**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (1): 5-19

**Keywords:** Water; Diarrhea-epidemiology; Prevalence; Water Supply

**Abstract:** Egypt is approaching universal access to improved water supply, but the variable quality of improved water may have a measureable health impact. We investigated the impact of different measures of improved water access on the prevalence of diarrhoea among children aged under 5 years. Using data from the 2008 Egypt Demographic and Health Survey and propensity score matching techniques we compared children in households with improved water supplies, with/without interruptions to supplies and with/without in-home storage of water. Access to improved water that was not subject to cuts resulted in a significant 2.6 percentage point reduction in the prevalence of diarrhoea [4.7% reduction in rural areas], and access to improved water that was not stored prior to use resulted in a 3.5% reduction. Further research is needed to better understand the nature and causes of piped water interruptions in Egypt, in order to address potential infrastructure challenges that are leading to poorer health outcomes.

## Cholera

### **epidemiology**

#### **Cholera outbreak in Somalia**

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World Health Organization. Regional Office for the Eastern Mediterranean - Communicable Diseases Prevention and Control - Pandemic and Epidemic Diseases

**Weekly Epidemiological Monitor** 2016; 09 (09): 1

**Keywords:** Cholera-prevention and control; Disease Outbreaks; Diarrhea; Vibrio cholerae

**Abstract:** The Ministry of Health of Somalia re-reported a total of 5, 257 cumulative cases of suspected cholera including 84 deaths [CFR 1.6%] from January to December 2015 to WHO, The outbreak is still continuing in several districts in the South-ern and Central Regions.

## Cholera Vaccines

#### **Use of OCV in Iraq**

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World Health Organization. Regional Office for the Eastern Mediterranean - Communicable Diseases Prevention and Control - Pandemic and Epidemic Diseases

**Weekly Epidemiological Monitor** 2016; 09 (01): 1

**Keywords:** Cholera-epidemiology; Disease Outbreaks; Refugees

**Abstract:** In November 2015, Iraq successfully conducted its first ever mass vaccination campaign using Oral Cholera Vaccine [OCV] as part of the countries effort to prevent spread of an outbreak of cholera in northern part. Chromosomes, Human, Pair 9

#### **Report of a case with trisomy 9 mosaicism**

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (3): 249-252

**Keywords:** Trisomy; Mosaicism; Cytogenetic Analysis

**Abstract:** Trisomy 9 is a rare chromosome disorder with high neonatal mortality. It is often seen in mosaic form. Most patients who survive are severely mentally retarded. The main features of this syndrome are "bulbous" nose, microphthalmia, dislocated limbs, and other anomalies of skeletal, cardiac, genitourinary, and central nervous system. Most patients have developmental and cognitive impairment. Patients with mosaicism survive longer than non-mosaics, but it was believed that the degree of mosaicism in lymphocytes or fibroblasts does not associate with survival or degree of impairment. In this report, we present a 2, 5-year-old male case of mosaic trisomy 9, to show the wide range of clinical findings in this chromosome disorder. The patient had cardiac anomalies, inguinal hernia, and undescended testes. He had low-set slightly malformed ears, deeply-set malformed eyes, small palpebral fissures, micrognathia, developmental delay and unilateral optic hypoplasia. The most prominent facial anomaly in this patient was eye anomalies. Cytogenetic analysis with G banding showed karyotype 47XY, +9 in 44% of peripheral lymphocytes examined [47XY, +9[22], 46XY[28]]. His parents' karyotypes were normal. Moderate developmental delay, which was detected in this patient shows that the range of motor and cognitive impairment in this chromosomal disorder is quite broad. This fact should be considered in genetic counseling as well as prenatal diagnosis of this chromosomal disorder.

## Clobetasol

### adverse effects

#### Frequency of serum cortisol suppression in patients using 0.05% clobetasol propionate as topical steroid for more than 3 weeks

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 199-202

**Keywords:** Hydrocortisone-pharmacology; Cross-Sectional Studies; Clobetasol-therapeutic uses; Administration, Topical; Hydrocortisone-blood

**Abstract:** Objective: To determine the frequency of serum cortisol suppression in patients using 0.05% clobetasol propionate as topical steroid for more than 3 weeks. Study Design: Cross sectional Study. Place and Duration of Study: Both outdoor and indoor patients of Dermatology Department, Military Hospital [MH] Rawalpindi for duration of 6 months i.e. from 18[th] April 2012 to 17[th] October 2012 were selected. Patients and Methods: A total of 189 patients were included in the study. Non-probability purposive sampling technique was used. Early morning [0800 hrs] serum for cortisol levels was taken before starting the treatment and same was repeated after 3 weeks at AFIP. Effect modifiers like age and gender were controlled through stratification. The data was analyzed using SPSS version 10. The quantitative variables like age, duration of illness were calculated by taking standard deviation and mean whereas the qualitative variables like gender, suppression of serum cortisol levels were calculated by taking percentages and frequency. Frequency of serum cortisol suppression was presented according to gender and age groups. Results: Majority of the patients selected were between 31-40 years i.e. 44.98% [n=85]. Gender distribution was 61.90% [n=117] males and 38.10% [n=72] females. Frequency of serum cortisol suppression in patients using 0.05% Clobetasol propionate as topical steroid for more than 3 weeks was seen in 33.33% [n=63]. Conclusion: The frequency of serum cortisol suppression was significantly higher amongst patients using clobetasol propionate 0.05%. Therefore patients prescribed clobetasol propionate 0.05% topically should be checked for serum cortisol suppression regularly if the application is intended to be used for more than 3 weeks.

## Cochlear Implants

#### Comparison of auditory perception in cochlear implanted children with and without additional disabilities

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (3): 186-190

**Keywords:** Auditory Perception; Disabled Children; Cross-Sectional Studies

**Abstract:** Background: The number of children with cochlear implants who have other difficulties such as attention deficiency and cerebral palsy has increased dramatically. Despite the need for information on the results of cochlear implantation in this group, the available literature is extremely limited. We, therefore, sought to compare the levels of

auditory perception in children with cochlear implants with and without additional disabilities. Methods: A spondee test comprising 20 two-syllable words was performed. The data analysis was done using SPSS, version 19. Results: Thirty-one children who had received cochlear implants 2 years previously and were at an average age of 7.5 years were compared via the spondee test. From the 31 children, 15 had one or more additional disabilities. The data analysis indicated that the mean score of auditory perception in this group was approximately 30 scores below that of the children with cochlear implants who had no additional disabilities. Conclusion: Although there was an improvement in the auditory perception of all the children with cochlear implants, there was a noticeable difference in the level of auditory perception between those with and without additional disabilities. Deafness and additional disabilities depended the children on lip reading alongside the auditory ways of communication. In addition, the level of auditory perception in the children with cochlear implants who had more than one additional disability was significantly less than that of the other children with cochlear implants who had one additional disability.

## Colistin

### administration and dosage

#### **Establishment and comparison of nephrotoxicity associated with the use of various doses of colistin in rabbits**

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 180-184

**Keywords:** Kidney-pathology; Drug-Related Side Effects and Adverse Reactions; Rabbits; Colistin-toxicity

**Abstract:** Objective: This study was designed to assess the nephrotoxicity associated with various doses of Colistin sulfate in rabbits. Study Design: Laboratory based randomized controlled trials, Place and Duration of Study: This study was held at Army Medical College, Rawalpindi. Study period was from 15[th] April till 30[th] April 2012. Material and Methods: Rabbits were divided into three groups of six rabbits each. Baseline serum urea, serum creatinine and serum electrolytes were estimated. A loading dose of colistin infusion was given followed by I.M injections for six days. Rabbits were sacrificed 24 hours after the last dose and both kidneys were sent for histopathology. Results: There was marked nephrotoxicity in high toxic group where as in low toxic group mild nephrotoxicity was evident. Conclusion: It was established that we may safely escalate dose of colistin up to four times the currently recommended schedule to combat the threat of resistance when using it for one to two weeks.

## Colorectal Neoplasms

#### **Association between hypolipidemias and colorectal carcinoma**

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 203-206

**Keywords:** Case-Control Studies; Lipids-blood

**Abstract:** Objective: To study association of hypolipidemias and primary colorectal carcinoma in population of patients of colorectal carcinoma presenting to Combined Military Hospital [CMH] Rawalpindi. Study Design: Case control study. Place and Duration of Study: Oncology department, Combined Military Hospital [CMH], Rawalpindi. Material and Methods: Forty one treatment naive patients between ages of 18-75, with histologically confirmed primary colorectal carcinoma were selected and their serum lipid profile was measured after an overnight fast, from Armed Forces Institute of Pathology [AFIP]. These levels were compared with 41 controls, selected from healthier population, using an unpaired T test. Frequency and percentages were computed for variables; sex, age and stage at presentation. Results: Colorectal carcinoma had significant association with triglycerides [ $p=0.007$ ], total cholesterol [ $p=0.014$ ] and LDL [ $p=0.013$ ]. Conclusion: There is an inverse relationship between serum total and LDL cholesterol, and colorectal carcinoma, implying that hypolipidemias may play a role in development of colorectal carcinoma

## epidemiology

### **Prevalence of anxiety and depression in patients with colorectal cancer in Babol - north of Iran [2008-12]**

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**Journal of Gorgan University of Medical Sciences** 2016; 18 (1): 101-107

**Keywords:** Anxiety; Depression; Prevalence; Cross-Sectional Studies; Surveys and Questionnaires

**Abstract:** Background and Objective: Colorectal cancer can significantly cause physical, psychological and social problems. This study was done to determine the prevalence of anxiety and depression in patients with colorectal cancer in Babol located in north of Iran. Methods: This cross-sectional, analytical study was done on 120 [75 males, 45 females] patients with colorectal cancer which registered in the Babol cancer registry in north of Iran during 2008-12. A questionnaire containing demographic information, aspects of the disease and HADS questionnaire was completed by interviewing to assess anxiety and depression for each patient. Results: The prevalence rate of depression and anxiety in patients was 23.4% and 30.8%, respectively. Gender, residency of rural area, and having comorbidities are related to depression among which location was identified as an independent predictor. Urban residency had 79% less risk of depression than rural residents [95% CI=0.06-0.67, OR=0.21, P<0.009]. Gender, resident of rural areas, unemployed, having comorbidities, low income and lack of education were associated with anxiety, among which only education was identified as an independent predictor [95% CI=L32-13.81, OR=4.27, P<0.015]. Conclusion: The prevalence of anxiety and depression in colorectal cancer patients was high in this area. Therefore, interventions are recommended to increase awareness and greater attention to rural women and controlling comorbidities.

## Communicable Diseases

### **Overview of the CSIRO Australian Animal Health Laboratory**

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**Journal of Infection and Public Health** 2016; 9 (3): 236-239

**Keywords:** Coronavirus Infections; Zoonoses; Communicable Diseases, Emerging

**Abstract:** Emerging infectious diseases arising from livestock and wildlife pose serious threats to global human health, as shown by a series of continuous outbreaks involving highly pathogenic influenza, SARS, Ebola and MERS. The risk of pandemics and bioterrorism threats is ever present and growing, but our ability to combat them is limited by the lack of available vaccines, therapeutics and rapid diagnostics. The use of high bio-containment facilities, such as the CSIRO Australian Animal Health Laboratory, plays a key role studying these dangerous pathogens and facilitates the development of countermeasures. To combat diseases like MERS, we must take a holistic approach that involves the development of early biomarkers of infection, a suite of treatment options [vaccines, anti-viral drugs and antibody therapeutics] and appropriate animal models to test the safety and efficacy of candidate treatments.

## Computer Communication Networks

### **Human Disease Insight: An integrated knowledge-based platform for disease-gene-drug information**

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**Journal of Infection and Public Health** 2016; 9 (3): 331-338

**Keywords:** Knowledge; Databases, Genetic; Drug Information Services; Awareness; Health Knowledge, Attitudes, Practice

**Abstract:** The scope of the Human Disease Insight [HDI] database is not limited to researchers or physicians as it also provides basic information to non-professionals and creates disease awareness, thereby reducing the chances of patient suffering due to ignorance. HDI is a knowledge-based resource providing information on human diseases to both scientists and the general public. Here, our mission is to provide a comprehensive human disease database containing most of the available useful information, with extensive cross-referencing. HDI is a knowledge management system that acts as a central hub to access information about human diseases and associated drugs and genes. In addition, HDI contains well-classified bioinformatics tools with helpful descriptions. These integrated bioinformatics



tools enable researchers to annotate disease-specific genes and perform protein analysis, search for biomarkers and identify potential vaccine candidates. Eventually, these tools will facilitate the analysis of disease-associated data. The HDI provides two types of search capabilities and includes provisions for downloading, uploading and searching disease/gene/drug-related information. The logistical design of the HDI allows for regular updating. The database is designed to work best with Mozilla Firefox and Google Chrome and is freely accessible at <http://humandiseaseinsight.com>.

## Coronary Artery Bypass

### Frequency of increased fibrinolysis after coronary artery bypass grafting

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 262-265

**Keywords:** Fibrinolysis; Coronary Vessels

**Abstract:** Objective: To determine the frequency of increased fibrinolysis after coronary artery bypass grafting [CABG]. Study Design: Descriptive study. Place and Duration of Study: One year duration conducted in the Department of Pathology, Army Medical College in collaboration with Armed Forces Institute of Cardiology [AFIC] from December 2013 to November 2014. Material and Methods: Sixty patients were selected who were admitted to AFIC for CABG surgery. Venous samples were drawn from the patients immediately after surgery when the patients were shifted to post operative ward. Patients were selected by non probability purposive sampling technique. D-dimers were analysed by rapid agglutination assay. Results: Out of 60 patients included in the study, 50 [83.3%] were males and 10 [16.7%] were females. D-dimers level more than 200ng/ml were considered to show increased fibrinolysis. Raised D-dimers were present in 40 [66.6%] patients while they were normal in 20 [33.3%] patients. Twenty [33.3%] patients had D-dimers <200ng/ml, 27 [45%] patients had D-dimers between 200-400ng/ml, 7 [11.7%] patients had D-dimers between 400-800ng/ml and 6 [10%] had D-dimers between 800-1600ng/ml. Conclusion: Increased fibrinolysis was present in 40 [66.7%] patients. It is more common in older age than younger ones

## Coronary Artery Disease

### Red cell distribution width can predict the significance of angiographically intermediate coronary lesions

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**Medical Principles and Practice** 2016; 25 (1): 31-35

**Keywords:** Erythrocyte Indices; Coronary Stenosis; Coronary Angiography; Fractional Flow Reserve, Myocardial; Logistic Models

**Abstract:** Objective: In the present study, the association between red cell distribution width [RDW] with functional significance of intermediate coronary artery lesions was investigated. Materials and Methods: Two hundred and forty-six consecutive patients, 168 males and 78 females, who underwent fractional flow reserve [FFR] measurement for angiographically intermediate coronary stenosis [40-70% in quantitative coronary analysis] in the left anterior descending coronary artery were enrolled into the study. The functional significance of intermediate coronary artery lesions was determined by FFR measurement. An FFR value <0.75 was defined as functionally significant. Venous blood samples were taken within 48 h before the FFR measurement, and RDW levels were determined by a Coulter LH Series hematology analyzer. Logistic regression analysis was used to examine the association between functional significance in FFR measurement and other variables. Results: Of the 246 patients, 62 [25.2%] exhibited significant functional stenosis [FFR <0.75] in the FFR measurement. The mean RDW level was significantly higher in patients with significant stenosis [14.19 +/- 0.73 vs. 13.69 +/- 0.77, p < 0.001]. In stepwise multivariate logistic regression analysis, RDW [OR = 2.489, 95% CI = 1.631-3.799, p < 0.001] and male gender [OR = 2.826, 95% CI = 1.347-5.928, p = 0.006] were independent predictors of significant functional stenosis. Conclusion: Increased RDW levels were associated with functional significance of angiographically intermediate coronary artery stenoses.

## Coronavirus Infections

### **Is the Saudi public aware of Middle East respiratory syndrome?**

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**Journal of Infection and Public Health** 2016; 9 (3): 259-266

**Keywords:** Cross-Sectional Studies; Surveys and Questionnaires; Awareness; Health Knowledge, Attitudes, Practice

**Abstract:** To limit the spread of Middle East respiratory syndrome coronavirus [MERS-CoV] in Saudi Arabia, the Ministry of Health tried to raise public awareness using different public campaigns. We aimed to measure public awareness of MERS in Saudi Arabia. A cross-sectional study was conducted between May and June 2014 using a newly designed Arabic questionnaire that was distributed and completed online. We analyzed the response of 1149 respondents across Saudi Arabia. We found that 97% of the participants were aware of MERS. In addition, 72% realized that coughing and sneezing could spread the infection. Furthermore, 83% thought that some patients with MERS could be cured. Moreover, 62% knew that no vaccine can prevent the disease. However, only 36% realized that taking antibiotics will not stop the infection, and only 41% recognized that no medication has yet been manufactured to treat it. Regarding protection measures, 74% used hand sanitizers, 43% avoided crowded places, and 11% wore masks in public places. Moreover, only 47% knew that bats and camels are the primary source of the virus. As anticipated, this level of awareness varied between the different categories of the studied population. Female, married, older, and more educated participants were significantly more knowledgeable about the disease. Public awareness of MERS is generally sufficient. However, some false beliefs about treatment were fairly common. In addition, almost half of the population remains unaware that bats and camels are the most likely sources of the virus.

### **The search for therapeutic options for Middle East Respiratory Syndrome [MERS]**

Arabi, Yaseen M.; Hayden, Frederick G.; Balkhy, Hanan H.; Hui, David S.; Kerkhove, Maria D. Van; Fowler, Robert A  
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**Journal of Infection and Public Health** 2016; 9 (3): 213-215

**Keywords:** Therapeutics; Mortality

## epidemiology

### **Closing the knowledge gaps on MERS: three and half years since its detection, what have we learnt and what needs to be done urgently?**

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**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (2): 85-86

**Keywords:** Health Knowledge, Attitudes, Practice; Coronavirus Infections-transmission; Ambulatory Care; Coronavirus Infections-diagnosis

### **Hospital outbreak of MERS in Buridah City**

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World Health Organization. Regional Office for the Eastern Mediterranean - Communicable Diseases Prevention and Control - Pandemic and Epidemic Diseases

**Weekly Epidemiological Monitor** 2016; 09 (11): 1

**Keywords:** Arbovirus Infections; Middle East Respiratory Syndrome Coronavirus; Disease Outbreaks; Hospitals; Health Personnel; Cross Infection

**Abstract:** After some quiet period, a new cluster of MERS cases has been reported from Buridah city of Qassim Region. A number of cases are also linked to a hospital outbreak which is ongoing since February 2016. As of 13 March 2016, a total of 23 cases of MERS including 7 deaths were reported. Of these reported case, six were healthcare workers.

**Proceedings of the Middle East Respiratory Syndrome [MERS] Coronavirus research initiative workshop, September 9-10 2015 in Riyadh, KSA**

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**Journal of Infection and Public Health** 2016; 9 (3): 205-207

**Keywords:** Mortality; Education

**therapy****Nitazoxanide, a new drug candidate for the treatment of Middle East respiratory syndrome coronavirus**

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**Journal of Infection and Public Health** 2016; 9 (3): 227-230

**Keywords:** Middle East Respiratory Syndrome Coronavirus; Interleukin-6; Respiratory Tract Infections; In Vitro Techniques; Thiazoles-therapeutic uses

**Abstract:** Nitazoxanide is a broad-spectrum antiviral agent undergoing clinical development for treatment of influenza and other viral respiratory infections. Nitazoxanide exhibits in vitro activity against Middle East respiratory syndrome coronavirus [MERS-CoV] and other coronaviruses, inhibiting expression of the viral N protein. Nitazoxanide also suppresses production of pro-inflammatory cytokines in peripheral blood mononuclear cells and suppresses interleukin 6 production in mice. Having been used extensively in clinical trials and in post-marketing experience, nitazoxanide is an attractive drug candidate for treatment of Middle East respiratory syndrome. Future research should include in vitro mechanism studies, animal models of MERS-CoV infection, clinical trials, including dose-ranging trials, and evaluation of combination therapy with other potential MERS-CoV antivirals.

**Rapid generation of a human monoclonal antibody to combat Middle East respiratory syndrome**

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**Journal of Infection and Public Health** 2016; 9 (3): 231-235

**Keywords:** Antibodies, Monoclonal; Coronavirus Infections-prevention and control

**Abstract:** The last century has witnessed the emergence of several previously unknown viruses as life-threatening human pathogens. Several examples include HIV, Ebola, Lujo, and, most recently, the Middle East respiratory syndrome [MERS] and Ebola. In this study, we describe a method for the swift generation of a human-derived monoclonal antibody, known as LCA60, as a treatment for MERS infections. LCA60 antibody was generated using the Cellclone Technology from the immortalized B cells of a human donor recovering from MERS. Only four months were required from the initial screening of B cells to the development of a stable CHO cell line suitable for the production of clinical grade antibody, thereby delineating a rapid pathway for the development of antiviral therapies against emerging viruses. Currently, the LCA60 antibody is being considered for clinical development, which includes prophylaxis in individuals at risk and a treatment for severe MERS-CoV infections

**transmission****Preventing healthcare-associated transmission of the Middle East Respiratory Syndrome [MERS]: Our Achilles heel**

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**Journal of Infection and Public Health** 2016; 9 (3): 208-212

**Keywords:** Delivery of Health Care; Coronaviridae; Coronavirus Infections-prevention and control; Disease Transmission, Infectious

**Abstract:** Middle East Respiratory Syndrome [MERS] coronavirus is the most recent among the Coronaviridae family to jump species and infect humans. Major health-care associated MERS outbreaks have occurred in the Middle East

and Korea that affected both patients and healthcare workers. These outbreaks were characterized by intra and inter-hospital spread and were exacerbated specifically by overcrowding, delayed diagnosis and appropriate use of personal protective equipment. Recent experience with this virus emphasizes the importance of compliance with infection control practices and with other interventions addressing patient triage, placement and flow within and between healthcare facilities. Our Achilles heel remains compliance with the best infection prevention practices and their harmonization with patient flow. Both infection prevention compliance and maintenance of patient flow are critical in preventing healthcare-associated transmission of many of these emerging infectious diseases, including MERS.

## Delivery of Health Care

### organization and administration

#### **The role of human capital development and innovation in healthcare organizations of Markazi province in Iran**

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**Journal of Health Management and Informatics [JHMI]** 2016; 3 (1): 20-25

**Keywords:** Organizations; Surveys and Questionnaires; Organizational Innovation; Statistics, Nonparametric

**Abstract:** Introduction: Increase of environmental challenges inevitably changes our methods; challenges such as rapid change, diversity of workforce, globalization, evolution and transformation of business and family roles, lack of skills and emergence of service sector affect not only the organizational structure but also the nature and functional role of business. In response to these environmental challenges and in order to increase the efficiency and effectiveness and ultimately the productivity, the organizations have shifted toward two facilitators: human capital development and innovation. The aim of the current study is to survey the correlation between these two facilitators. Method: This research is a descriptive-analytical survey. The current research population includes all experts and managers of healthcare organizations of Markazi Province in Iran in January 2015. The statistical population consisted of 650 individuals; 180 individuals were chosen as the statistical sample using Cochran's formula. In terms of data collection method, this is a descriptive-bivariate correlative type research. Library and internet resources developed based on the variables were used for collecting data related to theoretical concepts and extracting primary elements and indicators. Cronbach's alpha test has been used for confirming the validity and reliability of the questionnaire [0.863] which indicates a high reliability. The number of collected questionnaire was 180 and they have been analyzed using Spearman correlation. Results: According to t-statistic in all hypotheses which is out of the range of -1.96-1.96, it could be said that human capital development, healthcare management, infrastructure of official institutions, infrastructure of unofficial institutions and knowledge [education] management development have a significance effect on innovation at significance level of 95%. As a result, all research hypotheses were confirmed. Conclusion: Innovation in inputs results in increased efficiency of employees especially in educational sections of the organization. According to the creative problem-solving process in ideal situation [truth finding-finding ideas and solutions], the organization can deal with the changes imposed on the system and reach the goal of more efficiency.

## Dengue

### epidemiology

#### **Dengue fever contained in Egypt**

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World Health Organization. Regional Office for the Eastern Mediterranean - Communicable Diseases Prevention and Control - Pandemic and Epidemic Diseases

**Weekly Epidemiological Monitor** 2016; 09 (02): 1

**Keywords:** Dengue; Disease Outbreaks; Dengue Virus

**Abstract:** Dengue fever which was reported in Assuit governorate of Egypt during October- December 2015 has been successfully contained. A total of 309 suspected cases were reported from this event from 01 October to 31 December 2015 with no death. Dengue virus type 1 [DEN-1] was detected by ELISA and PCR at the Central Public Health Laboratory as the causative strain responsible for this outbreak

## psychology

### **Depression, anxiety, stress and their effect upon the self-efficacy in dengue patients**

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**JPMI-Journal of Postgraduate Medical Institute** 2016; 30 (1): 62-65

**Keywords:** Depression; Anxiety; Stress, Psychological; Cross-Sectional Studies; Self Efficacy

**Abstract:** Objective: To explore the correction of self-efficacy with depression, anxiety and stress in dengue patients. Methodology: For this purpose a sample of 200 dengue patients [men = 132, women = 68] was employed from two different hospitals of Lahore by using purposive sampling technique of collect data. In order to measure self-efficacy of dengue patients General Self Efficacy Scale, and Depression, Anxiety and Stress Scale [DASS] was used to assess depression, anxiety and stress of dengue patients. Correlation and simple regression statistical techniques were used for data analyses. Results: Results depicted that. self-efficacy has significant negative relationship with depression [ $r = -.42, p < .01$ ], anxiety [ $r = -.49, p < .01$ ] and stress [ $r = -.42, p < .01$ ] in dengue patients. Regression coefficients of depression [ $\beta = -.32$ ], anxiety [ $\beta = -.24$ ] stress [ $\beta = -.14$ ] and overall combine effect of DASS [ $\beta = -.45$ ] have negatively predicted self-efficacy of dengue patients. Conclusion: Self-efficacy has negative correlation with depression, anxiety and stress in dengue patients. Self-efficacy cannot be obtained in the presence of depression, anxiety and stress. These negative states [DASS] weaken self-efficacy of an individual.

## Dental Care

### **Factors that limit access to dental care for person with disabilities**

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 230-234

**Keywords:** Disabled Persons; Cross-Sectional Studies; Surveys and questionnaires; Oral health

**Abstract:** Objective: To assess the perceived barriers to oral health care for persons with disabilities living in Islamabad. Study Design: Cross-sectional study. Place and Duration of Study: Study was conducted at general community organizations in Islamabad providing services to Persons with Disabilities [PWDs] from Jan 2013 to Jun 2013 over a period of 6 months. Material and Methods: A total of 500 persons with disability who were dependent on someone to reach dental facilities were included in the study while those who were not dependent on someone were excluded from the study. A 12-item self-administered questionnaire was used. Patient's demographic data, type of disability and barriers to oral health care were recorded. Finally data was analyzed by using SPSS version 20. Results: Out of 400 respondents the most common disability was physical impairment [33.25%] followed by visual impairment [20.75%] and polio [14.75%]. The major barriers to oral health care were transportation difficulty [48%] followed by high cost of dental treatment [39.5%] and inability to sit on dental chair /co-operate with dentist [31.25%]. Conclusion: Significant barriers exist that limit the access to dental care for Person with Disabilities [PWDs].

## Dental Caries

### **A comparative study of oral health parameters in molar incisor hypomineralization and high-caries-risk children aged 8-11 years**

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**Medical Principles and Practice** 2016; 25 (1): 85-89

**Keywords:** Oral Health; Dental Enamel Hypoplasia; Child; DMF Index; Periodontal Index; Dental Plaque Index

**Abstract:** Objective: To compare oral health parameters: decayed missing filled teeth [dmft, DMFT], gingival index and plaque index in high-carries-risk children and children with molar incisor hypomineralization [MIH]. Subjects and Methods: A study group of 81 children affected by MIH [49 girls, 32 boys] aged 8-11 years [mean 9.4 +/- 1.1] was race-, age- and sex-matched with 81 high-carries-risk children not affected by MIH [controls]. The MIH and control groups were divided into four subgroups according to age. The oral health parameters of both groups were recorded under clinical conditions. Mann-Whitney U and Kruskal-Wallis tests were used to compare the differences in the number of MIH-affected teeth between the groups. Other traits were evaluated with the ANOVA test, and Duncan's multiple comparison tests were used for comparing means. Linear and ordinal regression analyses were used to model the variables. Results: The mean age of the participants was 9.4 +/- 1.1 years, and the mean number of affected teeth was 7.7 [range 3-12] in the MIH group. The number of affected teeth and severity of MIH did not change significantly with age and sex [ $p > 0.05$ ]. A comparison of the oral health parameters of MIH-affected and control children according to groups did not show any statistically significant differences between the groups for all parameters for all groups [ $p > 0.05$ ] with the exception of DMFT values at 10 years of age [ $p < 0.05$ ]. In a comparison of the total scores without taking age into account, the children with MIH showed a significantly higher DMFT value than the children without MIH [ $p < 0.05$ ], but there were no significant differences between the dmft, GI and PI values of the study groups [ $p > 0.05$ ]. Conclusion: The children in the MIH group had higher DMFT than those without MIH. Hence, the presence of MIH could have a detrimental effect on oral health parameters, especially on DMFT values.

## Dental Debonding

### Laser-aided ceramic bracket debonding: a comprehensive review

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*Journal of Lasers in Medical Sciences* 2016; 7 (1): 2-11

**Keywords:** Ceramics; Lasers; Orthodontic Brackets; Dental Materials; Dental Enamel

**Abstract:** Different techniques have been introduced for the removal of ceramic brackets. Since the early 1990s, lasers have been used experimentally for debonding ceramic brackets. The goal of this study is to give a comprehensive literature review on laser-aided ceramic bracket debonding. PubMed and Google Scholar databases were used to identify dental articles with the following combination of key words: Ceramic brackets, Debonding, and Laser. Sixteen English articles from 2004 to 2015 were selected. The selected studies were categorized according to the variables investigated including the intrapulpal temperature, shear bond strength, debonding time, enamel damage and bracket failure. Most articles reported decreased shear bond strength and debonding time following laser irradiation without any critical and irritating increase in pulpal temperature. There were no reports of bracket failure or enamel damage. Laser irradiation is an efficient way to reduce shear bond strength of ceramic bracket and debonding time. This technique is a safe way for removing ceramic bracket with minimal impact on intrapulpal temperature and enamel surface and it reduces ceramic bracket failure.

## Dental Scaling

### Influence of different proportions of external irrigation during the Er, Cr:YSGG laser irradiation on wear and roughness of root surface

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*Journal of Lasers in Medical Sciences* 2016; 7 (1): 51-55

**Keywords:** Tooth Wear; Lasers, Solid-State; Erbium; Chromium

**Abstract:** Introduction: The aim of this study was to evaluate the influence of different levels of external irrigation during irradiation with an erbium, chromium: yttrium-scandium-gallium-garnet [Er, Cr:YSGG] laser on the roughness and wear of dental tissue during scaling procedures. Methods: Twenty-Five uniradicular bovine teeth had the proximal surfaces planed and divided into 3 regions: upper, middle and lower. The upper region was treated with hand instruments, the middle region was not treated and served as a control, and the lower region was treated by the Er, Cr:YSGG laser. The teeth were randomly divided into five groups according to the different proportions of external irrigation used during the laser irradiation: G1: 10%; G2: 20%; G3: 30%; G4: 40% and G5: 50%. The samples were analyzed for roughness and wear on the root surface irradiated with the laser. Results: There were no differences in the surface roughness and wear parameters between the groups irradiated with the laser, but the laser irradiation produced a rougher surface of the dentin than treatment with hand scaling. Conclusion: Changes in the external irrigation level did not influence the wear and roughness of root surfaces treated with an Er, Cr:YSGG laser.

## Dentofacial Deformities

### epidemiology

#### Prevalence of oro-dental anomalies among schoolchildren in Sana'a city, Yemen

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**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (1): 34-39

**Keywords:** Prevalence; Child; Students; Cross-Sectional Studies

**Abstract:** Practitioners and policy-makers need information about the relative frequency of dental anomalies among children in their region. This study investigated the prevalence of different oral anomalies among schoolchildren in Sana'a city, Yemen. A sample of 1000 private and public schoolchildren aged 4-12 years were examined by the same examiner using disposable tongue blades. The total prevalence of oral anomalies was 15.1%, most commonly in boys [male:female ratio 3.2:1] aged 7-12 years. The most prevalent dental anomaly related to hard tissues was tooth hypoplasia [2.8%], followed by hypocalcification [2.6%] then microdontia [0.5%], macrodontia [0.4%], hypodontia [0.4%], supernumerary teeth [0.3%], tooth transposition [0.3%], dental fusion [0.2%] and gemination [0.2%]. The most prevalent soft tissues anomaly was fissured tongue [4.0%], followed by ankyloglossia [1.8%], geographic tongue [0.9%], macroglossia [0.4%] and hairy tongue [0.3%]. Appropriate measures need to be taken early to mitigate the negative impact and later costs of treatment of anomalies.

## Depression

#### The relationship between self-reported and clinician rated assessment of depression in clinically depressed patients

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 221-224

**Keywords:** Psychometrics; Health Services, Indigenous; Symptom Assessment

**Abstract:** Objective: The study examines the relationship between a clinician rated measure Hamilton Rating Depression Scale [HRSD] and indigenously developed self-reported Siddiqui-Shah Depression Scale [SSDS] in clinically depressed and matched control group. Study Design: Correlational design. Place and Duration of Study: Data was collected over a span of 6 month from Department of Psychiatry Pakistan Naval Ship [PNS] Shifa Karachi and Combined Military Hospital [CMH] Malir, Karachi. Material and Methods: A purposive sample of forty-seven patients from psychiatry department and thirty-six participants in the matched group were first screened on DSM-IV criteria independently by a psychologist, and then assessed on HRSD by the psychiatrist followed by assessment of depression on SSDS by the participants. Results: SSDS has significant relationship with HRSD for both matched group [ $r=.74$ ,  $p<.001$ ] and depressed group [ $r=.38$ ,  $p<.01$ ]. SSDS also indicates moderate sensitivity index [.79] and a significant specificity index [.89]. Conclusion: Self-report measure [SSDS] correlates significantly with clinician rated assessment measure [HRSD]; it also demonstrates psychometric properties to be recommended for screening depression in general practice

### epidemiology

#### Frequency and predictors of depression among elderly of Rawalpindi Pakistan

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**JPMI-Journal of Postgraduate Medical Institute** 2016; 30 (1): 35-40

**Keywords:** Cross-Sectional Studies; Aged; Prevalence; Surveys and Questionnaires

**Abstract:** Objective: To determine the frequency of depression and identify predictors of depression in elderly. Methodology: This cross-sectional study was conducted in Holy Family Hospital Rawalpindi during a three months period from October 2013 to December 2013 among elderly coming to outdoor patient department Patients and their

attendants of age 64 or above were included in the study. 209 patients were selected by consecutive sampling technique. Questionnaire included so-cio-demographic profile and geriatric depression scale [CDS] scale consisting of 15 items. Analysis was done by utilizing SPSS16. Descriptive statistics were performed. The results were recorded as frequencies. P-values were obtained and results were depicted in form of tables and figures. Chi-square test and Fisher's exact test were applied to the data to calculate the association. Results: A sample of 209 was studied and depression was found to be present in 28.71%. There was no statistically significant relationship between education, intimacy, sleep, having children or having not financial support and depression [P-value > 0.05]. The analysis showed that there was a significant relationship between gender, people ever diagnosed for depression in life, persons having suicidal ideas at least once in life, poor marital relationship, monthly income between Rs10, 000 to 30, 000, elderly having no care giver and depression [P-value < 0.05]. Conclusion: High frequency of depression was found among elderly community and diversity exists in predicting factors

## psychology

### Psychological predictors of depression in diabetes

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**PJMR-Pakistan Journal of Medical Research** 2016; 55 (1): 25-28

**Keywords:** Diabetes Mellitus; Quality of Life; Cross-Sectional Studies; Social Support; Diabetes Mellitus, Type 2

**Abstract:** Objective: To study the association between psychological predictors of depression i.e. social support and quality of life in diabetic patients. Study design, settings and duration: Cross-sectional study conducted in clinics of different hospitals of Gujranwala, Abbottabad and Islamabad from January 2013 to January 2014. Patients and Methods: Fifty nine adult type II diabetic patients of both genders who came to hospital's diabetic clinic for diabetic treatment were selected for the study. The data was collected using multidimensional scale of perceived social support WHO quality of life scale and depression scale, All these scales had already been validated in the local population. Data was analyzed using SPSS Version 20. Results: Social support and quality of life were negatively related to depression. Within gender, it was found that male were significantly higher on social support, quality of life, friends support, physical quality of life and social quality of life as compared to female. Conclusion: If diabetic patient's social support and quality of life is improved, their levels of depression decrease. Depression associated with diabetes was more common in females. Policy message: Diabetes patients need better social support and better quality of life to cope up with diabetes related depression.

## Diabetes Complications

### Number of renal echogenic foci in patients of fatty liver in relation with diabetes

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 254-257

**Keywords:** Diabetes Mellitus; Kidney-ultrasonography; Fatty Liver; Cross-Sectional Studies; Ultrasonography

**Abstract:** Objective: To establish a relationship of numbers of renal echogenic foci and the grades of fatty liver with the time span of diabetes mellitus. Study Design: Cross sectional study. Place and Duration of Study: Radiology Department of Combined Military Hospital [CMH] Kohat from 1[st] January 2014 to 1[st] May 2014. Material and Methods: Patients reporting for ultrasound abdomen in Radiology Department at CMH Kohat and showing renal echogenic foci i.e. bright foci without significant distal acoustic shadowing and fatty liver were selected and included in this study. Forty [40] patients were selected in the study by non probability purposive sampling and these were categorized into three groups according to the number of renal echogenic foci i.e. those with less than 5 were grouped as REF 1, those with 5-10 as group REF-2 and those with more than 10 foci as group REF-3. Patients having associated fatty liver that is those showing bright liver along with vascular blurring in liver parenchyma were grouped as mild, moderate and severe depending upon the ultrasound attributes of fatty liver [FL]. The clinical and demographic variables were laid down. All of the patients were subsequently subjected to fasting blood sugar levels and glycated hemoglobin HBA1C with their consent. The patients having normal fasting blood sugar levels [3.3-5.6 mmol/L] were excluded from the study. These cases were grouped according to the HbA1C levels i.e. 5.6-6.8%, 6.8%-7.6% and >7.6% as good, fair or poor control patients respectively. Data was analyzed by SPSS version 20. Results: Average age of patients included in the study was 48.62 years [SD=10.43] with 70% female patients. Twenty four [60%] patients had mild FL, 14 [35%] patients had moderate FL and 2 [5%] patients had severe FL. Thirteen [32.5%] patients were in



REF-1 group, 9 [47.5%] were in group REF-2 and 8 [20%] were in group REF-3. Fifteen [37.5%] patients had good control of diabetes, 16 [40%] patients had fair control while 9 [22.5%] patients had poor control. Duration of diabetes varied from newly diagnosed [0 years] to 20 years with mean duration of 5.33 years [SD=4.73]. Nine [22.5%] patients were. recently diagnosed, 18 [45%] patients had disease span of 2 - 5 years while 13 [32.5%] patients had disease span of more than 5 years. Number of echogenic foci had significant and stronger association with disease span [ $p < 0.001$ , Cramer's  $V = 0.660$ ] than disease control [ $p = 0.002$ , Cramer's  $V = 0.466$ ]. Insignificant association was observed between severity of fatty liver with disease span [ $p = 0.373$ ] and disease control [ $p = 0.581$ ]. Conclusion: In diabetics with fatty liver the number of the renal echogenic foci have a link to the time span of diabetes. The greater the number of renal echogenic foci in these cases, the longer is the time span of the disease.

## Diabetes Mellitus, Type 1

### therapy

#### **Complementary and alternative medicine to treat diabetes mellitus type 1 in Southern Iran**

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (1): 71-72

**Keywords:** Complementary Therapies; Cross-Sectional Studies; Child; Disease Management; Medicine, Traditional

## Diabetes Mellitus, Type 2

### therapy

#### **Effect of pioglitazone on serum high density lipoprotein [HDL] levels of type-2 diabetics**

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 212-215

**Keywords:** Thiazolidinediones-pharmacology; Cholesterol, HDL-blood; Hemoglobin A, Glycosylated

**Abstract:** Objective: To study effect of Pioglitazone on serum high density lipoprotein levels in patients with type 2 diabetes mellitus. Study Design: Single blind randomized controlled trial. Place and Duration of Study: Department of medicine, Combined Military Hospital Multan from 1[st] Feb 2011 to 30[th] July 2012. Material and Methods: A total of 276 already diagnosed patients of diabetes mellitus type 2 between age of 30-80 years, presenting to the outpatient department of Combined Military Hospital Multan were selected. Type 2 diabetic patients were allocated group A or B using random allocation. Base line blood sugar fasting [BSF], glycosylated hemoglobin [HbA1c], high density lipoprotein [HDL] levels were taken. Group A was treated with Pioglitazone along with other hypoglycemic agents while group B was treated with only hypoglycemic agents and multivitamin tablets were added as placebo. After 12 weeks of treatment, serum HDL levels were measured to analyze effect of pioglitazone on serum HDL levels. Results: Pioglitazone group showed significant improvement in the serum HDL levels from baseline HDL 46.38 + 6.44mmol/L to 49.80+ 5.86 mmol/L after 12 weeks of therapy, [ $p = 0.001$ ]. Conclusion: Pioglitazone when used in combination with other oral hypoglycemic agents has a beneficial effect on the serum HDL levels of the diabetics.

## Diabetes, Gestational

### diagnosis

#### **Gestational diabetes mellitus; still a great problem**

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**Professional Medical Journal-Quarterly [The]** 2016; 23 (1): 15-19

**Keywords:** Prospective Studies; Tertiary Care Centers; Pregnant Women; Prevalence; Obesity

**Abstract:** Objectives: The present study was designed to find the importance of proper screening and early diagnosis of gestational diabetes mellitus. Study Design: A prospective/ descriptive study Place of Study: tertiary care hospital Hyderabad. Duration of Study: from September 2014 to November 2014. Materials and Methods: A total of 168 pregnant females between the ages of 20-40 years and in their 24<sup>th</sup> to 28<sup>th</sup> week of gestation were enrolled for the study. Oral Glucose Tolerance Test of all the participants was done after an overnight fasting of 10-12 hours. All the participants were given 75gm of glucose per 100 ml of distilled water. The blood samples were collected after two hours time for serum glucose levels. Results: Most of the participants were below 26 years of age 47[27.9%] with the mean age of 30.2 +/- 5.83 years. However the highest prevalence of GDM was observed in age group 31-35 years [36%]. Among the 25 cases of gestational diabetes mellitus the highest number of patients with GDM were multipara [40%] followed by parity of 3-4 gravida [32%]. Twenty seven women [16%] women had family history of diabetes mellitus. Among these 12/27 [44.4%] women were found with GDM, compared to 15/141 [10.6%] who have no family history of diabetes mellitus. Total 14 [8.33%] women were found obese, out of these 8 [57%] women had GDM while only 6 [42.8%] women had no GDM. Conclusion: The prevalence of GDM in the present study is found to be 14.8%. A prevalence of GDM was higher in the elderly multiparous females who were overweight and had family history of diabetes mellitus.

## Diabetic Foot

### diagnosis

#### Diabetic foot ulcer; sequelae

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**Professional Medical Journal-Quarterly [The]** 2016; 23 (1): 1-5

**Keywords:** Diabetes Mellitus; Disease Management; Diabetic Foot-complications

**Abstract:** Objective: The number of diabetic patients is increasing at a rapid rate<sup>1</sup>. Management of diabetic foot has been a challenge for medical professionals. This study was carried out to find the sequelae of diabetic foot ulcer management. Study design: Observational analytical study. Setting: Military Hospital, Combined Military Hospitals Rawalpindi and MIMC teaching Hospital, Mirpur [AJK]. Period: Sep 2009 to August 2013. Materials and methods: Total 310 patients were included in this study as outdoor and indoor cases. Out of these 184 were males and 126 were females. Age affected ranged from 20 years to 90 years. Average age was 50 years. Wagner's grading for diabetic foot ulcer was used as guideline for management. Results: Hyperglycemia was controlled in consultation with physicians in all these patients. Out of these 310 patients 199 [64%] patients got their feet wounds healed on conservative management without amputation while 111 [35.8%] patients had to undergo some amputation at some level. Conclusion: Diabetes mellitus, fore runner of so many diseases requires multidisciplinary approach. Well controlled diabetes mellitus, good feet hygiene, rational antibiotics in light of culture/sensitivity report and timely conservative or active surgical intervention produce good results in diabetic foot management

### etiology

#### Association of bacteria in diabetic and non-diabetic foot infection - an investigation in patients from Bangladesh

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**Journal of Infection and Public Health** 2016; 9 (3): 267-277

**Keywords:** Diabetes Mellitus; Drug Resistance, Multiple; C-Reactive Protein; Diabetes Complications

**Abstract:** The microbial community on a host relies on its immune status and pathophysiological condition. Diabetes mellitus is a metabolic disorder associated with a 25% increased risk of developing foot infection. The pathophysiological differences between diabetic foot infection [DFI] and non-DFI patients may alter the microbial composition in infections. The present study aims to comparatively analyze the microbes colonized in DFI and non-DFI patients in Bangladesh. Pus specimens were collected from 67 DFI and 12 non-DFI patients to investigate the bacteria associated with foot infection. For this investigation, an array of microbiological, molecular biological and immunological approaches were performed. Common bacteria detected in both DFI/non-DFI samples were *Pseudomonas* spp. [22/29%], *Bacillus* spp. [12/3%], *Enterobacter* spp. [22/7%], *Staphylococcus* spp. [13/13%] and *Acinetobacter* spp. [10/10%]. *Enterococcus* spp. [9%] and *Klebsiella* spp. [8%] occurred only in DFI patients, whereas

Citrobacter spp. [29%] was only detected in non-DFI samples. The rate of occurrence of three organisms, namely, Enterococcus spp. [Z] = 2.2125, Klebsiella spp. [Z] = 1.732, Bacillus spp. [Z] = 1.9034, were also statistically significant. Most of the isolates from DFI patients were commonly resistant to the cephalosporin [Ceftazidime, Ceftriazone, Cefurozime] and monobactam [Aztreonam] groups of antibiotics. DFI patients had comparatively higher C-reactive protein [CRP] levels than non-DFI patients, and a positive correlation was observed between multi-antibiotic resistance and CRP levels [one of the markers of chronic subclinical inflammation]. The present investigation implicated a complex association of the bacterial population in DFI compared with non-DFI with different antimicrobial resistance properties, which was linked with CRP levels.

## Diazinon

### pharmacology

#### Effect of Diazinon on pituitary-gonadal axis and histological alteration of seminiferous tubules in adult rat testis

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**Journal of Gorgan University of Medical Sciences** 2016; 18 (1): 23-29

**Keywords:** Seminiferous Tubules; Testis; Rats, Wistar; Testosterone

**Abstract:** Background and Objective: Diazinon is an organophosphate insecticide. which inhibits the enzyme acetylcholinesterase. This study was done to evaluate the effect of Diazinon on pituitary-gonadal axis and histological alteration of seminiferous tubules in adult rat testis. Methods: In this experimental study, 40 adult male Wistar rats were randomly allocated into five groups including control, sham and experimental 1, 2 and 3. Animals in experimental group 1, 2 and 3 were received 50, 100 and 150 mg/kg/bw of diazinon for 28 days, orally, respectively. Animals in control group did not receive any substance. Animals in sham group were received an equivalent amount of normal saline. The animals were euthanized after 28 days and a blood sample was collected via heart puncture and testes were removed for histological studies. Results: Diazinon significantly reduced serum testosterone concentration, sertoli cell, leydig cell count, primary spermatocyte and spermatid [P<0.05]. Diazinon had no significant effect on the body and testis weight in the experimental groups compared to controls. Conclusion: Diazinon reduces the concentration of testosterone and cells in seminiferous tubule in adult rat.

## Disasters

#### Addressing non-communicable diseases in disaster risk reduction - an issue of equity

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**Journal of Epidemiology and Global Health** 2016; 6 (2): 119-121

**Keywords:** Risk; Health Equity

**Abstract:** The issues raised by noncommunicable diseases [NCDs] during and after disasters are a challenge to equity within local communities, as well as between countries. Individuals with NCDs are particularly vulnerable in disasters and their aftermath given health systems are disrupted. Although welcome progress has been made in taking NCDs and equity into account in the UN General Assembly ratified agreement, the Sendai Framework for disaster risk reduction 2015-2030, there is need now for a clear plan of implementation.

#### Responding to physical and psychological health impacts of disasters: case study of the Iranian disaster rehabilitation plan

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**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (3): 212-218

**Keywords:** Behavioral Medicine; Rehabilitation; Environment; Disaster Planning

**Abstract:** This paper describes the process of developing a national pre-disaster plan for physical health and psychological rehabilitation of disaster-stricken communities. Data gathered from a literature review and expert panel

discussions informed the process of drawing up unified definitions of physical and psychological health rehabilitation, carrying out stakeholder and STEEP-V analyses, and assigning the responsible organization and the collaborative organizations for each task. The Ministry of Health and the Welfare Organization were selected as the two responsible organizations. Integrated management at all levels, and sharing information, education and funding, were identified as ways to improve stakeholders' participation and collaboration. A system is needed for evaluating the implementation of the disaster rehabilitation plan, using valid and reliable indicators.

## Drug Interactions

### **Interaction between meropenem and valproate: Not to overlook**

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**IJEHSR-International Journal of Endorsing Health Science Research** 2016; 4 (1): 27-31

**Keywords:** Valproic Acid; Thienamycins; Tertiary Care Centers

**Abstract:** Background Valproic acid is commonly used to treat various types of seizures and follows nonlinear pharmacokinetics with a therapeutic range of 50 - 150 microg/ml. Several retrospective studies have reported that concomitant administration of VPA and carbapenem lead to decrease in VPA levels significantly and results in failure of seizure control. Different studies suggest the mechanism of interaction as [i] carbapenem may inhibit the gastrointestinal absorption of VPA [ii] meropenem accelerated the glucuronidation of VPA to VPA glucuronide [VPA-G] and inhibited the hydrolysis of VPA-G back to the VPA thus increasing the clearance of VPA and VPA-G and [iii] due to fast erythrocyte distribution of VPA by carbapenem, VPA levels has been reduced. Purpose To report four cases who "were maintained on therapeutic levels of VPA and had sub-therapeutic levels afterward due to the administration of meropenem. Method through CPOE system of AKUH the cases in 2014 were identified who were on. valproate-meropenem combination with the available pre and post meropenem valproate levels. Result Patients of different age group showed significant reduction in VPA levels within 48 hour of administration of meropenem. Conclusion This case series describing the clinical importance of this probable drug interaction and promote its awareness among physicians in Pakistan. If a patient was therapeutic on the same dose of valproate and need broad spectrum coverage, a dose adjustment of valproate should not be done and physicians should consider either alternative broad spectrum antibiotic or renally cleared antiepileptic to avoid this frequently used dangerous drug combination.

## Drug Users

### **Change in attitudes and knowledge of problem drug use and harm reduction among a community cohort in Kabul, Afghanistan**

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**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (3): 183-192

**Keywords:** Health Knowledge, Attitudes, Practice; Harm Reduction; Cohort Studies; Surveys and Questionnaires; Cross-Sectional Studies; Residence Characteristics

**Abstract:** This pre-post evaluation aimed to measure changes in knowledge and attitudes towards drug users among community representatives in Kabul, Afghanistan, over a period of expansion of harm reduction and drug dependence programming. A convenience sample of 160 professionals aged 18+ years completed interview questionnaires in 2007 and 2009. Views endorsing programme quality and the provision of condoms, infection counselling/testing and needle/syringe distribution increased significantly over the. 2-year period. In 13 of 38 statements, there was a substantial [ $> 10\%$ ] change in agreement level, most commonly among men and medical professionals. Attitudes concerning support of drug users remained largely positive, with substantial attitude changes in some subgroups of the population. further community education through the media and a more cohesive government drug policy may be needed to strengthen community support for harm reduction/drug treatment in Afghanistan.

## Eczema

### diagnosis

#### **Eczema; frequency of different types in a tertiary care hospital**

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**Professional Medical Journal-Quarterly [The]** 2016; 23 (1): 60-64

**Keywords:** Eczema-epidemiology; Cross-Sectional Studies; Prospective Studies; Tertiary Care Centers

**Abstract:** Objectives: To determine the frequency of different types of eczema in patients presenting in a tertiary care hospital. Study Design: Cross sectional descriptive type of study. Setting: Hamdard University Hospital Karachi. Period: January 2013 till December 2013. Patients and Methods: All new cases of any type of eczema were registered by nonprobability convenient sampling. Total 192 patients of both genders and all ages were enrolled after taking informed consent. Diagnosis was made on detailed history and clinical examination by consultant dermatologist. All specific and relevant investigations were done according to requirement. Patients were divided in two groups, exogenous eczema and endogenous eczema, for convenience. Data was analyzed by the latest version of SPSS. Results: There were 192 patients, out of which 52.08% were males and 47.91% females. Out of the total presented patients 50% had endogenous eczema, 43.37% had exogenous eczema and 25.62% had unspecified eczema. In endogenous group 11.45% had hand dermatitis followed by seborrhoeic dermatitis, atopic dermatitis and asteatotic eczema in descending frequency of presentation. Pityriasis alba, discoid eczema and pompholyx were seen less frequent. In exogenous eczema allergic contact dermatitis was seen in 14.06% patients, while irritant contact dermatitis in 11.45% patients. Infective eczema and photo-allergic eczema were seen in small number of patients. Conclusion: It was found in this study that allergic contact dermatitis was most common type of eczema followed by other types. Whatever the type is, eczema can be treated, symptoms can be relieved and recurrences can be prevented by appropriate therapy. All types of eczema affect patient's quality of life adversely. However, they can be prevented by educating patients and their relatives to take adequate safety measures like using good quality emollients prophylactically.

## Education

#### **Histopathology training and fellowship in pakistan-how to make it more effective to simultaneously prepare for fellowship of royal college of pathologists [FRCPath]**

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 173-175

**Keywords:** Teaching; Physicians; Fellowships and Scholarships; Training Support

## Education, Medical

#### **Clinical education stressors in medical trainees in Shahid Sadoughi University of Medical Sciences, Yazd**

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**Journal of Advances in Medical Education and Professionalism** 2016; 4 (1): 8-12

**Keywords:** Teaching; Learning; Students, Medical; Training Support; Surveys and Questionnaires

**Abstract:** Introduction: Stress is an important factor in the educational process. Teaching and learning are stressful processes. This stress can affect one's ability and change his/her performance. The purpose of this study was to investigate stressors of clinical education from the perspective of medical students in Yazd University of Medical Sciences. Methods: This descriptive-analytic study was conducted in Yazd University of Medical Science during year 2014-2015. The sample size was 170 medical students who were selected randomly. The data were collected by a questionnaire including four components: interpersonal relationship, educational environment, clinical experience and the unpleasant emotions. A significance level of 0.05 was considered for analysis. The statistical analyses included

descriptive statistics, ANOVA and T-tests, using SPSS software, version 14. Results: The results showed that the highest domain score belonged to interpersonal relationship [3.33 +/- 0.3] followed by unpleasant emotions domain [3.3 +/- 0.3]. The lowest domain score of clinical education stressors was educational environment [3.12 +/- 0.1]. The results showed that the mean score of interpersonal relationship domain was more in women than in men [p<0.05]. Conclusion: The relationship between teachers and students is an effective factor in all dimensions of clinical education stressors. So proper measures such as the promotion of scientific awareness of teachers and educational staff about factors that lead to stress and the best way to communicate with students should be taken to reduce the students' stress.

### **Oral assessment in medical education: time for change**

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 294-295

**Keywords:** Educational Measurement; Needs Assessment; Students

**Abstract:** There has been a phenomenal change in medical education in Pakistan also over the last 30 years. Through medical education, training of future doctors is done in such a way that they are capable of managing the health problems of those who seek their services in a competent and humane manner. The traditional oral examination/viva-voce is a favorite assessment tool in basic medical sciences as well as in clinical examinations for various reasons in our country.

### **Paediatric continuing medical education needs and preferences of UNRWA physicians in Jordan**

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**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (1): 48-52

**Keywords:** Pediatrics; Physicians; Surveys and Questionnaires; Schools, Medical

**Abstract:** Most physicians who work in the United Nations Relief and Works Agency [UNRWA] infant and child health programme in Jordan are general practitioners with no postgraduate training in paediatrics. Furthermore, in resource-poor or remote settings, the ability to deliver live continuing medical education [CME] is often limited. A questionnaire exploring the resources available for accessing CME, preferences for types of CME, current sources of CME and topics of interest in the field of paediatric care was sent to all 92 physicians practising in UNRWA clinics in Jordan. Of the 89 respondents 80% had attended live medical lectures for CME and 70% CME meetings. Despite most physicians having access to the Internet only 52.8% were interested in Internet-based courses for accessing CME. There was a statistically significant relationship between year of graduation from medical school and preference for Internet-based CME. Implications for CME participation and paediatric CME topics are discussed.

### **System based practice: a concept analysis**

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**Journal of Advances in Medical Education and Professionalism** 2016; 4 (2): 45-53

**Keywords:** Students, Medical; Competency-Based Education

**Abstract:** Introduction: Systems-Based Practice [SBP] is one of the six competencies introduced by the ACGME for physicians to provide high quality of care and also the most challenging of them in performance, training, and evaluation of medical students. This concept analysis clarifies the concept of SBP by identifying its components to make it possible to differentiate it from other similar concepts. For proper training of SBP and to ensure these competencies in physicians, it is necessary to have an operational definition, and SBP's components must be precisely defined in order to provide valid and reliable assessment tools. Methods: Walker and Avant's approach to concept analysis was performed in eight stages: choosing a concept, determining the purpose of analysis, identifying all uses of the concept, defining attributes, identifying a model case, identifying borderline, related, and contrary cases, identifying antecedents and consequences, and defining empirical referents. Results: Based on the analysis undertaken, the attributes of SBP includes knowledge of the system, balanced decision between patients' need and system goals, effective role playing in interprofessional health care team, system level of health advocacy, and acting for system improvement. System thinking and a functional system are antecedents and system goals are consequences. A case model, as well as border, and contrary cases of SBP, has been introduced. Conclusion: The identification of SBP attributes in this study contributes to the body of knowledge in SBP and reduces the ambiguity of this concept to make it possible for applying it in training of different medical specialties. Also, it would be possible to develop and use more precise tools to evaluate SBP competency by using empirical referents of the analysis.

## Education, Medical, Continuing

### **Improving continuing medical education by enhancing interactivity: lessons from Iran**

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**Journal of Advances in Medical Education and Professionalism** 2016; 4 (2): 54-63

**Keywords:** General Practitioners; Surveys and Questionnaires

**Abstract:** Introduction: Continuing Medical Education [CME] has been considered as a lifelong commitment for doctors to provide the optimal care for patients. Despite a long history of creating CME programs, outcomes are far from ideal. The present qualitative study aims to clarify the barriers affecting effectiveness of the CME programs in Iran based on the experiences of general practitioners. Methods: Sixteen general practitioners were recruited to participate in in-depth interviews and field observations concerning experiences with CME. The study was performed using a qualitative content analysis method. The codes, categories and themes were explored through an inductive process in which the researchers moved from specific to general. Results: The participants' experiences identified a number of barriers, particularly insufficient interaction with the instructors; additional problems included the teachers' use of an undifferentiated approach; unreal and abstract CME; and ignorance of the diverse reasons to participate in CME. Conclusion: Based on the study results, there are multiple barriers to effective implementation of CME in Iran. The key barriers include insufficient interaction between the trainees and providers, which must be considered by other stakeholders and program designers. Such interactions would facilitate improved program design, invite more specific tailoring of the education to the participants, allow for more effective educational methods and set the stage for outcome evaluation from the learners actually applying their new knowledge in practice. Replication of these findings with another sample would improve confidence in these recommendations, but these findings are broadly consistent with findings in the educational literature on improving the efficacy of CME.

### **The relationship between employees' continuing education and performance in Tehran's teaching hospitals**

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**Journal of Health Management and Informatics [JHMI]** 2016; 3 (1): 26-29

**Keywords:** Employee Performance Appraisal; Hospitals, Teaching; Cross-Sectional Studies; Health Personnel; Education, Continuing

**Abstract:** Introduction: Continuing education and training of employees significantly affect a hospital's performance and efficiency, and learning organizations usually exhibit higher efficiency. Hence, the objective of this study was to evaluate the correlation between the hospital employees' continuing education and performance indicators in the teaching hospitals affiliated to Tehran's Azad University. Method: A cross-sectional study was conducted in the teaching hospitals affiliated to Tehran's Azad University in 2014. The subjects consisted of 70 professional hospital employees, including physicians, nurses, midwives and other personnel who had attended continuing education courses. A data collection form was used to collect the data. The data were analyzed with SPSSW-20 software. Pearson correlation coefficient was used at a significance level of 0.05. Results: The number of continuing education courses held for physicians and nurses was equal [five courses], while fewer courses were held for the remaining personnel. There were significant associations between the employees' continuing education and bed occupancy rate [ $p=0.009$ ] and bed turnover interval [ $p=0.01$ ]. There was no significant association between the employees' continuing education and hospital death rate [ $p=0.19$ ]. Conclusion: Training employees ultimately affects their performance in the hospital. Hence, a deeper insight into the significance of hospital training is needed for decision-making policy-makers and for hospitals' executive managers to efficiently use the limited therapeutic resources and eventually achieve optimum effectiveness.

## Embryo Transfer

### **A comparison of success rates of embryo transfer on weekdays and weekends**

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**IJFS-International Journal of Fertility and Sterility** 2016; 10 (1): 48-52

**Keywords:** Fertilization in Vitro; Pregnancy; Retrospective Studies; Infertility

**Abstract:** Background: The aim of this study is to examine the effect of the embryo transfer [ET] day on clinical pregnancy success rates in in vitro fertilization-ET [IVF-ET] cycles. Materials and Methods: In this retrospective study, we divided patients with infertility who underwent IVF-ET with fresh embryos into two groups depending on whether the ET was performed on weekdays or weekends. The main outcome measure was to compare the clinical pregnancy rates of patients with similar demographic and clinical characteristics who underwent ET on weekdays or weekends. Results: A total of 188 patients underwent IVF-ET on weekdays [n=156] or weekends [n=32]. Both groups had similar demographic and cycle characteristics. The overall pregnancy rate was 42.8%. Among the study groups, the weekday group had a 40.2% ET success rate and the weekend group had a 54.8% success rate [P=0.517]. Although no statistically significant difference existed between the two groups, we observed an absolute 14.6% increase in pregnancy rate for ETs performed during weekends compared to those performed on weekdays, with a 35% statistical power. Conclusion: ETs performed during weekends were more successful than ETs performed during weekdays with an absolute 14.6% increase in clinical pregnancy rate. This finding should be confirmed by conducting further studies with larger groups of patients.

## Endometriosis

### diagnosis

#### Evaluation of risk factors associated with endometriosis in infertile women

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**IJFS-International Journal of Fertility and Sterility** 2016; 10 (1): 11-21

**Keywords:** Risk Factors; Retrospective Studies; Laparoscopy; Infertility, Female; Pelvic Pain

**Abstract:** Background: Endometriosis affects women's physical and mental wellbeing. Symptoms include dyspareunia, dysmenorrhea, pelvic pain, and infertility. The purpose of this study is to assess the correlation between some relevant factors and symptoms and risk of an endometriosis diagnosis in infertile women. Materials and Methods: A retrospective study of 1282 surgical patients in an infertility Institute, Iran between 2011 and 2013 were evaluated by laparoscopy. Of these, there were 341 infertile women with endometriosis [cases] and 332 infertile women with a normal pelvis [comparison group]. Chi-square and t tests were used to compare these two groups. Logistic regression was done to build a prediction model for an endometriosis diagnosis. Results: Gravidity [odds ratio [OR]: 0.8, confidence interval [CI]: 0.6-0.9, P=0.01], parity [OR: 0.7, CI: 0.6-0.9, P=0.01], family history of endometriosis [OR: 4.9, CI: 2.1-11.3, P<0.001], history of galactorrhea [OR: 2.3, CI: 1.5-3.5, P=0.01], history of pelvic surgery [OR: 1.9, CI: 1.3-2.7, P<0.001], and shorter menstrual cycle length [OR: 0.9, CI: 0.9-0.9, P=0.04] were associated with endometriosis. Duration of natural menstruation and age of menarche were not correlated with subsequent risk of endometriosis [P>0.05]. Fatigue, diarrhea, constipation, dysmenorrhea, dyspareunia, pelvic pain and premenstrual spotting were more significant among late-stage endometriosis patients than in those with early-stage endometriosis and more prevalent among patients with endometriosis than that of the comparison group. In the logistic regression model, gravidity, family history of endometriosis, history of galactorrhea, history of pelvic surgery, dysmenorrhoea, pelvic pain, dyspareunia, premenstrual spotting, fatigue, and diarrhea were significantly associated with endometriosis. However, the number of pregnancies was negatively related to endometriosis. Conclusion: Endometriosis is a considerable public health issue because it affects many women and is associated with the significant morbidity. In this study, we built a prediction model which can be used to predict the risk of endometriosis in infertile women.

## Epidermis

#### Epidermal differentiation complex: a review on its epigenetic regulation and potential drug targets

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**Cell Journal [Yakhteh]** 2016; 18 (1): 1-6

**Keywords:** Epigenomics; Epigenesis, Genetic; Keratinocytes; Skin



**Abstract:** The primary feature of the mammalian skin includes the hair follicle, inter-follicular epidermis and the sebaceous glands, all of which form pilo-sebaceous units. The epidermal protective layer undergoes an ordered/programmed process of proliferation and differentiation, ultimately culminating in the formation of a cornified envelope consisting of enucleated corneocytes. These terminally differentiated cells slough off in a cyclic manner and this process is regulated via induction or repression of epidermal differentiation complex [EDC] genes. These genes, spanning 2 Mb region of human chromosome 1q21, play a crucial role in epidermal development, through various mechanisms. Each of these mechanisms employs a unique chromatin re-modelling factor or an epigenetic modifier. These factors act to regulate epidermal differentiation singly and/or in combination. Diseases like psoriasis and cancer exhibit aberrations in proliferation and differentiation through, in part, dysregulation in these epigenetic mechanisms. Knowledge of the existing mechanisms in the physiological and the aforesaid pathological contexts may not only facilitate drug development, it also can make refinements to the existing drug delivery systems.

## Ethics, Medical

### **Ethics in health practice and research: an EMR perspective**

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**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (1): 62-63

**Keywords:** Public Health Practice; Ethics; Bioethics; Health Services Research; Mediterranean Region

## Exercise

### **Effect of exercise on pseudo dilution anemia in healthy male subjects. A comparative study**

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**IJEHSR-International Journal of Endorsing Health Science Research** 2016; 4 (1): 15-19

**Keywords:** Anemia; Hemoglobins; Erythrocyte Indices; Hematocrit; Erythrocytes

**Abstract:** Regular exercise is largely done to have maintained body shape and fitness. It exerts influence on almost all physiological and psychological parameters. One of these is dilutional anemia or sports anemia that is the initial adaptation of body to exercise. The aim of present study was to evaluate the extent of dilutional anemia in healthy males who have been exercising for past three years at least. Randomly selected 40 male subjects from gymnasiums of Karachi were recruited in the study. Peripheral blood was collected pre and post exercise, and tested for hematocrit, hemoglobin concentration and red blood cell count. Increased hemoglobin concentration was observed which is directly related to increased red blood cell count which is inversely proportional to blood plasma level. So, decreased plasma level is the possible cause that pseudo dilution anemia was not observed in males who have been regularly exercising for past three years.

## Eye Foreign Bodies

### **surgery**

#### **Open globe injuries with intraocular foreign body: surgical outcome**

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**JPMI-Journal of Postgraduate Medical Institute** 2016; 30 (1): 52-57

**Keywords:** Eye Injuries; Prospective Studies; Vitrectomy; Morbidity

**Abstract:** Objective: To determine surgical outcome and residual co-morbidities after surgical intervention in eyes having Open Globe Injury [OGI] with retained Intra Ocular Foreign Body [IOFB]. Methodology: A prospective interventional case series was carried out at the department of Ophthalmology, Khyber Institute of Ophthalmic Medical Sciences [KIOMS], Hayatabad Medical Complex [HMC], Peshawar from 1st September 2012 to 30th November 2013. Patients who were followed post-operatively for at least 90 days were included. Eyes having open globe injury [OGI]

and intraocular foreign body [IOFB] who had surgical intervention were included in our study. Visual outcome was determined comparing final best corrected visual acuity [BCVA] with initial BCVA. Co-morbidities were noted at final follow up. For data analysis, Snellen's VA was converted to log MAR VA. Data was analyzed by SPSS version 16. Results: Total of 35 patients were included in our study. Male were 94.3% compared to 5.3% females. Mean age was 32.42 years. Bomb blast injury was cause of eye trauma in 60% cases while 40% were doing hammer and chisel work at the time of trauma. IOFB was impacted in anterior segment in 20% cases while it was impacted in posterior segment in 80% cases. IOFB removal was achieved in 33[94.28%] cases; silicone oil was used as temponade in 48.57% cases. Primary repair was required in 40% cases while rest 21[60%] eyes had self sealed wound. Primary surgical intervention in the form of Pars Plana Vitrectomy, IOFB removal with the use of intraocular magnet or forceps was carried out in 71% cases. Mean BCVA log MAR improved from initial BCVA of 2.20 to 1.20.common comorbidities at final visit were corneal scars, macular scars and cataract. Conclusion: Bomb blast injuries are most common cause of OGI with IOFB in our region. Significant visual improvement occurs in most of the cases after skilled vitreo-retinal surgical interventions.common ocular co-morbidities are corneal scar, macular scar and cataract.

## Faculty

### Faculty development programs for medical teachers in India

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**Journal of Advances in Medical Education and Professionalism** 2016; 4 (2): 97-101

**Keywords:** Education, Medical; Education, Professional; Teaching

**Abstract:** Introduction: India has the highest number of medical colleges in the world and subsequently the higher number of medical teachers. There is a dire need of adopting a systematic approach to faculty development to enhance quality education to meet health challenges for 21st Century. This manuscript provides a landscape of faculty development programs in India, identifying gaps and opportunities for reforms in faculty development. Methods: Conventionally, FDPs are organized by medical colleges and universities through Basic Courses and Advanced Courses focusing on pedagogy. Medical Council of India is facilitating FDPs through 18 selected regional centers to enable medical teachers to avail modern education technology for teaching from July 2009. Foundation for Advancement of International Medical Education and Research has three Regional Institutes in India. Results: Recommendations include the need for formulating a national strategy for faculty development to not only enhance the quantity of medical teachers but also the quality of medical education; providing support for Departments of Medical Education/Regional Centers in terms of finance and staffing and incorporation of teaching skills in postgraduate training. Conclusion: Distance learning courses focusing on educational leadership and pedagogy for medical teachers can be an option to reach a wider audience. FDPs can be an asset in recruiting and retaining teachers as they offer valued professional development opportunities.

## Family Planning Services

### Men's perceptions of and participation in family planning in Aqaba and Ma'an governorates, Jordan

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**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (2): 124-132

**Keywords:** Health Knowledge, Attitudes, Practice; Perception; Cross-Sectional Studies; Surveys and Questionnaires; Contraception

**Abstract:** Men's participation in family planning has become a cornerstone in women's reproductive health. The aim of this study was to examine knowledge, attitudes and practice towards family planning of Jordanian men in southern Jordan. In across-sectional descriptive study in 2012, structured interviews were made with 104 married men in Aqaba and Ma'an governorates, Although 93.5% of the men had heard about family planning-most commonly the intrauterine device [IUD] and oral contraceptives-only 45.1% reported that they and their wife currently used it. Most men agreed about a minimum 2 years' child spacing [93.3%] and starting contraception after childbirth [71.2%] and that husband and wife should share decisions about family planning [90.2%] and the number of children [89.5%]. Level of education significantly affected current use of contraception, while number of children significantly affected previous use of contraception. Although married men had positive attitudes and good knowledge about family planning, this did not translate into practice of contraceptive use.

## Fast Foods

### **Trend of fast food consumption among university girls in Karachi, Pakistan**

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**IJEHSR-International Journal of Endorsing Health Science Research** 2016; 4 (1): 32-38

**Keywords:** Students; Surveys and Questionnaires

**Abstract:** Background The present study is aimed at improving the understanding of fast food trend among university girls. Objectives To study the trend of fast food consumption among university girls and to find out the association between university girls' perception regarding the unhealthfulness of fast food and their frequency of eating fast food. Methods A sample size of 50 female university students was selected for data collection through purposive sampling. By using questionnaire method, respondents were asked about their trend of fast food consumption by inquiring about their fast food preferences, their consumption pattern, and their monthly fast food expenditure. Correlation was used to analyze the association between the perception regarding the unhealthfulness of fast food and frequency of eating fast food. Results We found that the most preferred fast food item among university girls was burger [44.7%]. The majority of respondents consume fast food at an average of 2-3 times a month [29.8%] and the main reason for their fast food consumption was convenience [55.3%]. Among those who infrequently consume fast food, a majority [90%] agreed to the statement that fast food is unhealthful whereas among those who frequently consume fast food, a comparatively low percent [77.7%] agreed to the statement. Through correlation, we observed no association between all of the asked perceptions regarding fast food and frequency of fast food consumption among university girls [ $p > 0.05$ ]. Conclusion: The overall results showed that university girls' perception regarding the unhealthfulness of fast food does not necessarily affect their frequency of fast food consumption.

## Fertilization in Vitro

### **Effect of laparoscopic ovarian drilling on outcomes of in vitro fertilization in clomiphene-resistant women with polycystic ovary syndrome**

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**IJFS-International Journal of Fertility and Sterility** 2016; 10 (1): 42-47

**Keywords:** Sperm Injections, Intracytoplasmic; Clomiphene; Polycystic Ovary Syndrome; Retrospective Studies; Laparoscopy; Ovary

**Abstract:** Background: Recently the laparoscopic ovarian drilling [LOD] has been used as a surgical treatment for ovulation in women with polycystic ovarian syndrome [PCOS], although its mechanism and outcomes are still unclear. This study was undertaken to evaluate the in vitro fertilization [IVF] /intracytoplasmic sperm injection [ICSI] outcomes in clomiphene-resistant women with PCOS who were treated with LOD. Materials and Methods: In this retrospective study, we reviewed the medical records of 300 women between 20 to 35 years old with clomiphene-resistant PCOS who had an ovulatory infertility and who were nominated for IVF/ICSI. Based on their treatment history, they were located into the following two groups: group I [n=150] including PCOS women who had history of LOD at least 6 months to 3 years before IVF/ICSI, and group II [n=150] including PCOS patients without history of drilling. Both groups were treated with antagonist protocol in the assisted reproductive technology [ART] process. The duration of treatment cycles, number of oocytes and embryos obtained, chemical and clinical pregnancy rate, the number of embryos transferred, and presence of ovarian hyper stimulation syndrome [OHSS] were measured. To compare means and frequencies, Student's t test, Mann-whitney and chi-square tests were used. Results: Our results showed that ovarian cauterization before IVF/ICSI in patients with PCOS reduced the risk of OHSS [ $P=0.025$ ]. Despite the same pregnancy rate in both groups [ $P=0.604$ ], more obtained oocytes and embryos were seen on women without ovarian drilling than women with LOD [ $P<0.001$  and  $P=0.033$ , respectively]. Conclusion: There is no difference between the pregnancy rate in both groups. Due to significant reduction in OHSS in women undergoing LOD, this surgical treatment may be considered as a useful technique in the management of patients who have previously developed OHSS. However, there are ongoing concerns about long-term effects of LOD on ovarian function.

## Floods

### **Stress, anxiety, depression, and posttraumatic stress disorder among general population affected by floods in Pakistan**

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**PJMR-Pakistan Journal of Medical Research** 2016; 55 (1): 29-32

**Keywords:** Disasters; Stress, Psychological; Stress Disorders, Post-Traumatic; Cross-Sectional Studies; Prevalence; Anxiety; Depression

**Abstract:** Background: Natural disasters evoke certain distressful traumatic reactions which impede the lives of the survivors. The flood in July 2010 were one of the Pakistan's largest natural disasters. Objectives: To determine the prevalence of stress, anxiety, depression and posttraumatic stress disorder among adults exposed to 2010 floods in Pakistan. Study type, settings and duration: Cross sectional study done in flood affected areas of Pakistan. Data was collected from February 7 2013 to May 2013. Subjects and Methods: Sample of the study comprised of 2000 individuals. The data was collected from highly flood affected areas like Mianwali, Muzafar Garh, and Dera Ghazi Khan from Punjab, Nowshera and Peshawar from Kyber Pukhtunkhwa and Neelum Valley from Azad Jammu Kashmir. Data was collected by using convenient sampling technique. Stress, Anxiety and depression were measured by using Depression, Anxiety and Stress Scale. Posttraumatic stress disorder was assessed using the self-report measure, Impact of Event Scale. Results: Age range of the participants was between 15 to 65 years [Mean 28.7, SD = 7.1], for both genders. After about three years of floods, posttraumatic stress disorder was still present in both genders. However, it was higher among females and unemployed individuals. Moreover, higher exposure to flood was positively associated with posttraumatic stress disorder whereas, age, and education were negatively related with distress and posttraumatic stress disorder. Conclusion: Psychological disorders persists for several years after the disaster and results in significant personal distress. Policy message: The association between psychological distress, gender, age, education and employment status has to be taken into consideration when mental health policies for flood-survivors are planned at the national level.

## Gastrostomy

### **Experience with wide and narrow caliber percutaneous radiologically guided gastrostomy tubes**

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**JPMI-Journal of Postgraduate Medical Institute** 2016; 30 (1): 41-47

**Keywords:** Technology, Radiologic; Retrospective Studies; Catheters; Administration, Cutaneous

**Abstract:** Objective: To compare the percutaneous radiologically guided gastrostomy [PeRG] tubes of wide caliber with narrow caliber tubes. Methodology: This retrospective study was performed on 36 patients who were referred to Radiology department for PeRG tube placement between 2008 till 2012. comparison of wide caliber gastrostomy tubes [18-24 Fr] was done with narrow caliber tubes [14 Fr] considering procedure success rate, procedure related complications and catheter related minor and major complications. Results: Out of 36 patients, 18 patients were present in each group. Mean age of patients was 53.944 +/- 19.380. Procedure success rate was 100% in both groups and procedure related immediate complications were none in either groups. Peri-catheter leakage was observed in 1 patient in each group. Tube occlusion was present in 2 patients in narrow caliber group. Two patients had severe pain in wide caliber group and also 3 patients had wound infection in this group. Conclusion: Regardless of the type of radiologic catheter placed, PeRG can be considered as safe and highly successful procedure. Use of a 24 Fr gastrostomy tubes may show promising results if placed under radiological guidance with comparable technical success and complication rates to other caliber tubes.

## Genital Neoplasms, Female

### therapy

#### **Impact of multidisciplinary care in gynecological cancer patients**

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 207-211

**Keywords:** Gynecological Examination; Neoplasms; Quality of Health Care; Interdisciplinary Communication; Patients

**Abstract:** Objective: To determine the impact of multidisciplinary care in Gynecological cancer patients through multidisciplinary meetings [MDM] at MCH centre, Pakistan Institute of Medical Sciences [PIMS], Islamabad. Study Design: A pre and post intervention comparative study. Place and Duration of Study: The study was conducted at MCH centre, PIMS and Nuclear Oncology and Radiotherapy Institute, Islamabad from 1[st] April 2009 to 31[st] Mar 2010. Material and Methods: MDM is a regularly scheduled meeting of core and limited team members for the purpose of prospective treatment and care planning of newly diagnosed cancer patients. It was started in 2009 in order to improve the management of the cancer patients according to the international recommendations. In a total of 1 year study period 24 meetings were held. The major audit tool was the documentation of the meeting and its outcomes, patient communication and record of the Nuclear Oncology and Radiotherapy Institute of Islamabad [NORI]. A postgraduate student was deputed for documentation. Results: The study identified that MDM helped in achieving many of the best practices of international recommendations which include team approach to treatment planning as well as to care provision, throughout the complete patient pathway. The workload almost doubled as regards the surgery and outdoor cancer claims. There was a shorter delay to first seen in the cancer clinic and shorter duration from diagnosis to treatment. Team members were present in 90-100% of the meetings. Conclusion: MDM has swiftly improved the quality of care and follow up of patients with gynecological cancers and should be conducted at all tertiary care hospitals. Problems of access to high quality and timely care of poor patients in public sector should be addressed as poor patients are not compliant to timely follow-up.

## Glaucoma

### pathology

#### **Comparison of central corneal thickness in pseudoexfoliation glaucoma patients with healthy adults**

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 176-179

**Keywords:** Endothelium, Corneal; Intraocular Pressure; Cross-Sectional Studies; Exfoliation Syndrome; Corneal Pachymetry

**Abstract:** Objective: To compare the central corneal thickness [CCT] in pseudoexfoliation glaucoma [PXG] patients with healthy adults. Study Design: Cross-sectional comparative study. Place and Duration of Study: Armed Forces Institute of Ophthalmology Rawalpindi, from Dec 2009 to Feb 2011. Material and Methods: 30 patients having PXG [Group A] and 30 healthy adults having normal intraocular pressure [Group B] were included in the study. Intraocular pressure [IOP] in both groups was measured using gauged Goldmann applanation tonometer [GAT]. Central corneal thickness [CCT] was measured with an ultrasonic pachymeter. Results: The comparison of Mean CCT in both Groups showed that Mean CCT was significantly lesser [17-value <0.05] in PXG Group [519.73  $\mu$ m] as compared to healthy adults Group [567.48  $\mu$ m]. Conclusion: CCT in PXG patients group was found to be statistically significantly thinner as compared to healthy adults Group. CCT must be assessed in patients with pseudoexfoliation syndrome [PXF] in order to avoid the underestimation of IOP.

## Glioma

### therapy

#### **Is oncolytic virotherapy a viable platform for glioma treatment?**

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**JPMI-Journal of Postgraduate Medical Institute** 2016; 30 (1): 15-22

**Keywords:** Mortality; Oncolytic Virotherapy; Adenoviridae; Simplexvirus; Glioma-diagnosis

**Abstract:** Gliomas are devastating cancers of the nervous system with poor prognosis. Their aggressiveness produces a mortality rate rarely seen with other malignant tumours and the lack of effective treatment has left very few options. On-colytic viruses, with their long history of experimentation, have been deemed to be a key player in the future treatment of gliomas. This review will focus on the two main contenders, adenovirus and herpes simplex virus, for glioma treatment and discuss how far the field has come since its conception. The concept of each vector and the rationales behind their use will be contrasted before discussing the future of the field. Data was located by accessing the MEDLINE database using the PubMed search system. Data was selected on the basis of the insight its information provided as well as on the dependability of the experimental method used.

## Glucosephosphate Dehydrogenase Deficiency

#### **Employment of G6PD deficient patient in high altitude area- a case study**

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 296-297

**Keywords:** Hemolysis; Oxidative Stress; Altitude

## Glycoconjugates

#### **Glycoconjugates distribution in the lateral walls of spinal cord during mouse morphogenesis using lectin histochemical method**

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**Journal of Gorgan University of Medical Sciences** 2016; 18 (1): 16-22

**Keywords:** Spinal Cord; Morphogenesis; Lectins; Mice

**Abstract:** Background and Objective: Different organizers are involved in spinal cord development and differentiation by sending various messages. Specific glycoconjugates secreted from the cells of lateral wall of spinal cord can also act as neurogenesis and neural differentiation messengers. This study was carried out to determine the distribution of sugar compounds in the lateral walls of spinal cord during mice morphogenesis using lectin histochemistry method. Methods: In this experimental study, sections of BALB/c mice from 10-16 embryonic days were fixed in formalin and then histological sections were prepared. Tissue samples for reaction to the glycoconjugates were incubated with DBA, OFA, GSA1B4 and MPA lectins. Alcian blue with pH equal 2.5 was used for background staining. Results: DBA lectin did not react with the lateral wall of the spinal cord. MPA lectin showed severe reaction but consistent, especially in nerve fibers of the lateral wall of spinal cord. GSA1B4 lectin showed weak reaction in the cells and nerve fibers of the spinal cord, but severe reaction was clearly observed in blood vessels. OFA lectin showed severe reaction with -L-Fucose terminal sugar in the lateral walls of the spinal cord in early stages of morphogenesis. Conclusion: The most reaction in the lateral walls of the spinal cord was related to OFA, which reflects the importance of fucose terminal sugar by connecting [16] to the penultimate sugar N-acetyl-D-glucosamin [Glc-Nac] in the development of spinal cord. Due to severe reaction of GSA1B4 to blood vessels of spinal cord, use of this lectin for vascular studies, is recommended.

## Glycoproteins

### **CD133 is not suitable marker for isolating melanoma stem cells from D10 cell line**

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**Cell Journal [Yakhteh]** 2016; 18 (1): 21-27

**Keywords:** Peptides; Antigens, CD; Melanoma; Homeodomain Proteins; Transcription Factors; Stem Cells; Cell Line; Spheroids, Cellular; Cells, Cultured

**Abstract:** Objective: Cutaneous melanoma is the most hazardous malignancy of skin cancer with a high mortality rate. It has been reported that cancer stem cells [CSCs] are responsible for malignancy in most of cancers including melanoma. The aim of this study is to compare two common methods for melanoma stem cell enriching; isolating based on the CD133 cell surface marker and spheroid cell culture. Materials and Methods: In this experimental study, melanoma stem cells were enriched by fluorescence activated cell sorting [FACS] based on the CD133 protein expression and spheroid culture of D10 melanoma cell line, To determine stemness features, the mRNA expression analysis of ABCG2, c-MYC, NESTIN, OCT4-A and -B genes as well as colony and spheroid formation assays were utilized in unsorted CD133+, CD133- and spheroid cells. Significant differences of the two experimental groups were compared using student's t tests and a two-tailed value of  $P < 0.05$  was statistically considered as a significant threshold. Results: Our results demonstrated that spheroid cells had more colony and spheroid forming ability, rather than CD133+ cells and the other groups. Moreover, melanospheres expressed higher mRNA expression level of ABCG2, c-MYC, NESTIN and OCT4-A compared to other groups [ $P < 0.05$ ]. Conclusion: Although CD133+ derived melanoma cells represented stemness features, our findings demonstrated that spheroid culture could be more effective method to enrich melanoma stem cells.

## Granuloma, Pyogenic

### therapy

### **Management of a recurrent pyogenic granuloma of (j) the hard palate with diode laser: a case report**

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**Journal of Lasers in Medical Sciences** 2016; 7 (1): 56-61

**Keywords:** Lasers, Semiconductor; Recurrence; Palate, Hard

**Abstract:** Introduction: Pyogenic granuloma [PG] is a prevalent inflammatory hyperplasia of skin and oral mucosa which is often caused by constant low-grade local irritation, traumatic injury or hormonal factors. In many cases, gingival irritation and inflammation due to poor oral hygiene are precipitating factors. Oral PG occurs predominantly on the gingiva, but it is also encountered on the lips, tongue, buccal mucosa and rarely on the hard palate. Although surgical excision is the first choice of treatment, many other treatment modalities could be counted such as cryosurgery, sodium tetradecyl sulfate sclerotherapy, intralesional steroids, flash lamp pulsed dye laser, neodymium-doped yttrium aluminium garnet [Nd:YAG] laser, carbon dioxide [CO<sub>2</sub>] laser, erbium-doped yttrium aluminum garnet [Er:YAG] lasers and diode laser have been suggested. After surgical excision recurrence occurs up to 16% of these lesions. It is believed that recurrence ensues as a result of incomplete excision, failure to eliminate etiologic factors or repeated trauma. Case Report: A 50-year-old female was referred to the Department of Oral Surgery, Gazi University, School of Dentistry, complaining of a swelling and growth on the right side of the hard palate for four months. Patient reported a similar growth in the same area about two years earlier, which had turned out to be a PG by histopathology. The treatment plan included surgical excision of the lesion using diode laser. Results: The patient reported no pain after the surgery. She was discharged with a prescription of chlorhexidine mouthwash and necessary post-operative instructions. At 7 days follow up visit, immediate recurrence of the lesion was observed, and it was excised by diode laser with 2 mm margins at its clinical periphery, to a depth up to the periosteum, by the same operator. No recurrence or scarring was observed in 14 months follow-up. Conclusion; Although diode laser is a secure and efficient technique for the treatment of intraoral PG, in order to minimize its recurrence, the lesion should be excised with a wider margin down to the periosteum or to the causing agent. Also due to its high recurrence rate, long-term follow-up is recommended.

## Hallux Valgus

### **Correlation between Manchester grading scale and American orthopaedic foot and ankle society score in patients with hallux valgus**

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**Medical Principles and Practice** 2016; 25 (1): 21-24

**Keywords:** Foot; Ankle; Orthopedics; Congenital Abnormalities

**Abstract:** Objective: To evaluate the correlation between the Manchester Grading Scale and the American Orthopaedic Foot and Ankle Society [AOFAS] score in patients with a hallux valgus deformity. Subjects and Methods: The study sample included 181 feet of 122 patients with hallux valgus and 424 feet of 212 individuals without hallux valgus deformity as the control group. The severity of hallux valgus, utilizing a relative nonmetric scale, the Manchester Grading Scale, and the metric AOFAS score, was determined for all individuals in the hallux valgus and control groups. SPSS version 18 [Chicago, Ill., USA] was used for data analysis. Results: According to the Manchester Grading Scale, the 424 feet of the normal group were classified as 'no deformity'. In the hallux valgus group, 85 feet were classified as 'mild deformity', 67 as 'moderate deformity' and 29 as 'severe deformity'. The AOFAS total score in the control group was 99.14. In the hallux valgus group, patients with mild or moderate deformity had total scores of 86.20 and 68.19, respectively. For those with severe hallux valgus, the total score was 44.69 and the differences were statistically significant [ $p = 0.000$ ]. Using the Pearson correlation, strong negative correlations were found between the AOFAS score and the hallux valgus angle [HVA;  $r = -0.899$ ,  $p = 0.000$ ]. Strong negative correlations were demonstrated between the AOFAS score and the first intermetatarsal angle [IMA] as well [ $r = -0.748$ ,  $p = 0.000$ ]. Conclusions: The AOFAS score was negatively associated with the Manchester Grading Scale, HVA and first IMA. As the severity of hallux valgus increased, the AOFAS score seemed to decrease.

## Hand Hygiene

### **Assessment of hand hygiene techniques using the World Health Organization's six steps**

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**Journal of Infection and Public Health** 2016; 9 (3): 366-369

**Keywords:** Hand Disinfection; World Health Organization; Nurses; Physicians; Medical Staff

**Abstract:** The quality of hand hygiene was evaluated via direct observation for compliance with the six recommended World Health Organization steps. A total of 2497 HH opportunities, of which 1573 [63.0%] were hand rubs, were monitored over a five month period. Compliance was higher in nurses compared with physicians and auxiliaries and in steps 1 and 2 for hand rubs as well as the first three steps of hand washing, with lower rates after these steps. Rubbing of the thumbs and fingertips achieved the lowest rates of compliance in both HH types. A combination of the five recommended moments and six steps and staff education is recommended to improve the quality of hand hygiene.

## Health

### **The psychology of health and well-being in mass gatherings: a review and a research agenda**

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**Journal of Epidemiology and Global Health** 2016; 6 (2): 49-57

**Keywords:** Psychology; Social Identification; Health Status Indicators; Stress, Psychological

**Abstract:** Mass gatherings bring large numbers of people into physical proximity. Health benefit; typically, this physical proximity has been assumed to contribute to ill health risk, [e.g., through being stressful, facilitating infection transmission, etc.]. In this paper, we add a new dimension to the emerging field of mass gatherings medicine. Sharing-Drawing on psychological research concerning group processes, we consider the psy-Social identity chological



transformations that occur when people become part of a crowd. We then consider how these transformations may have various consequences for health and well-being. Some of these consequences may be positive. For example, a sense of shared identity amongst participants may encourage participants to view others as a source of social support which in turn contributes to a sense of health and well-being. However, some consequences may be negative. Thus, this same sense of shared identity may result in a loss of disgust at the prospect of sharing resources [e.g., drinking utensils] which could, in turn, facilitate infection transmission. These, and related issues, are illustrated with research conducted at the Magh Mela [North India]. We conclude with an agenda for future research concerning health practices at massgatherings.

## Health Care Facilities, Manpower, and Services

### **Relative inequalities in geographic distribution of health care resources in Kermanshah province, Islamic Republic of Iran**

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**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (1): 20-27

**Keywords:** Geography; Delivery of Health Care; Retrospective Studies; Cross-Sectional Studies; Health Resources; Socioeconomic Factors

**Abstract:** This study aimed to evaluate inequalities in the geographical distribution of human and physical resources in the health sector of Kermanshah province, Islamic Republic of Iran. In a retrospective, cross-sectional study, data from the Statistical Centre of Iran were used to calculate inequality measures [Gini coefficient and index of dissimilarity] over the years 2005-11. The highest Gini coefficient for human resources was observed for pharmacists in 2005 [0.75] and the lowest for paramedics in 2010 and 2011 [0.10]. The highest indices of dissimilarity were also for pharmacists in 2005 [29%] and paramedics in 2011 [3%]. For physical resources, the highest and lowest Gini coefficients were for rehabilitation centres in 2010 [0.59] and health houses in 2011 [0.12] respectively. Generally, inequalities in the distribution of health care resources were lower at the end of the study period, although there was potential for more equitable distribution of pharmacists, specialists, health houses and beds.

## Health Care Reform

### **Health transformation plan: goals achievement in Nemazee hospital**

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**Journal of Health Management and Informatics [JHMI]** 2016; 3 (1): 15-19

**Keywords:** Health Planning; Surveys and Questionnaires; Hospitals; Hospital Administrators; Education, Medical

**Abstract:** Introduction: The main purpose of this study was to assess fulfillment of goals about "Health Transformation Plan [HTP] of Ministry of Health, Treatment and Medical Education" from the perspective of managers, which is as one of the most important management challenges in the Health System Reform Plan. These goals included six packages determined by the Ministry of Health, Treatment and Medical Education, the fulfillment of each of which one was evaluated separately as sub-goals in the current study. Finally, the rank of each package in comparison to other packages was determined and presented, using means rank test [Friedman test]. Method: This study was conducted using a questionnaire in which comments of the senior and middle managers of Nemazee hospital were collected as the research data. Due to the fact that about one year has passed since the beginning of implementation of HTP and since there were no documented methods or questionnaires, the researcher designed a self-made questionnaire. The basis of designing the questionnaire was the set of guidelines developed for Health System Reform Plan. These guidelines include goals that a hospital should achieve during implementation of Health System Reform Plan. After sharing these goals with senior and middle managers of Nemazee hospital [as the place of research], they were converted to a questionnaire including 20 questions. The questionnaire included the goals that must be achieved in Nemazee hospital of Shiraz during the implementation of the plan. After designing the questionnaire, a preliminary test was taken to assess the reliability. Results: Cronbach's alpha coefficient [0.88] showed a high rate of reliability in the above questionnaire. After the final data collection, the questionnaire was tested in a sample of 100 senior and middle managers; the results showed that about six packages were specified by the Ministry of Health, Treatment and Medical Education. The majority of respondents [about 57%] believed that the HTP has greatly achieved its goals, and about 43% of them believed that the success of this plan was average. Conclusion: In ranking among the six main packages which was considered as sub-goals of this plan, the results showed that the studied packages were ranked respectively as follows: Package number 1, Package number 2, Package number 6, Package number 3, Package number 5 and Package number 4.

## Health Resources

### **Study of an investigation on factors influencing human resources productivity in Shiraz university of medical sciences**

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**Journal of Health Management and Informatics [JHMI]** 2016; 3 (1): 30-32

**Keywords:** Staff Development; Efficiency, Organizational; Cross-Sectional Studies; Surveys and Questionnaires

**Abstract:** Introduction: Human resources development is one of the most important components of any organization and detecting important factors influencing human resources management plays an essential role in the success of the firms. In this study, we investigated different factors influencing human resources productivity of Shiraz University of Medical Sciences staff. Method: The present research was a cross-sectional study. Sample size was calculated 208 individuals. To access information about the human resource productivity, a valid and reliable questionnaire was used. The data were analyzed using SPSS software. Pearson correlation was used for statistical analysis of the data [ $p=0.05$ ]. Results: The results showed that there was a statistically significant relationship [ $p\text{-value}<0.001$ ] between human resources productivity and factors affecting the productivity of human resources [motivational factors, leadership style, creativity and innovation, general and applied education, and competitive spirit]. Motivational factors [ $r =0.89$ ] and general education [ $r =0.65$ ] had the most and the least effects on human resources productivity. Conclusion: Considering the fact that motivational factors were the most effective factors on human resource productivity, we recommend that managers should care more than before about this factor; also, in order to motivate the employees, they should consider the staff's individual differences.

## Heat Stroke

### **diagnosis**

#### **Heat stroke in Karachi: An unprece-dented medical emergency**

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**Journal of Infection and Public Health** 2016; 9 (3): 370-371

**Keywords:** Emergency Medical Services; Heat Exhaustion

## Helicobacter Infections

### **Helicobacter pylori infection in children presenting with recurrent abdominal pain**

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 266-269

**Keywords:** Helicobacter pylori; Child; Abdominal Pain; Recurrence; Cross-Sectional Studies

**Abstract:** Objective: To determine the frequency of Helicobacter Pylori [H. pylori] infection in children presenting with recurrent abdominal pain [RAP]. Study Design: Descriptive cross-sectional study. Place and Duration of Study: This study was conducted at Combined Military Hospital [CMH] Quetta over a period of 10 months from 01-08-2011 to 31-05-2012. Material and Methods: A total of 83 children with recurrent abdominal pain were included in this study. Blood samples of patients were analyzed in laboratory of CMH Quetta for H. pylori Antibody [Ab] titers. Results: Mean age of the patients was 8.12 +/- 3.46 years. Distribution of gender showed that 44 patients [53.1%] were male while 39 patients [46.9%] were female. Mean duration of symptoms was 15.8% +/- 3.7 months. H. pylori infection was present in 27 [32.5%] patients. Topical ciprofloxacin is more effective in earlier control of congestion and discharge of ear in CSOM; [ $p$  value  $<0.001$  and  $<0.005$  respectively] as compared to Neomycin. Conclusion: H. pylori infection is common in children with RAP and presentation of epigastric pain in these patients can be considered as a warning sign to screen for H. pylori infection.

## Hemorrhagic Fever, Ebola

### therapy

#### **BCX4430 - A broad-spectrum antiviral adenosine nucleoside analog under development for the treatment of Ebola virus disease**

Taylor, Raymond; Kotian, Pravin; Warren, Travis; Panchal, Rekha; Bavari, Sina; Julander, Justin; Dobo, Sylvia; Rose, Angela; El-Kattan, Yahya; Taubenheim, Brian; Babu, Yarlagaadda; Sheridan, William P  
BioCryst Pharmaceuticals Inc

**Journal of Infection and Public Health** 2016; 9 (3): 220-226

**Keywords:** Ebolavirus; Antiviral Agents; Purine Nucleosides; Yellow Fever

**Abstract:** The adenosine nucleoside analog BCX4430 is a direct-acting antiviral drug under investigation for the treatment of serious and life-threatening infections from highly pathogenic viruses, such as the Ebola virus. Cellular kinases phosphorylate BCX4430 to a triphosphate that mimics ATP; viral RNA polymerases incorporate the drug's monophosphate nucleotide into the growing RNA chain, causing premature chain termination. BCX4430 is active in vitro against many RNA viral pathogens, including the filoviruses and emerging infectious agents such as MERS-CoV and SARS-CoV. In vivo, BCX4430 is active after intramuscular, intraperitoneal, and oral administration in a variety of experimental infections. In nonclinical studies involving lethal infections with Ebola virus, Marburg virus, Rift Valley fever virus, and Yellow Fever virus, BCX4430 has demonstrated pronounced efficacy. In experiments conducted in several models, both a reduction in the viral load and an improvement in survival were found to be related to the dose of BCX4430. A Phase 1 clinical trial of intramuscular administration of BCX4430 in healthy subjects is currently ongoing.

## Hemorrhagic Fevers, Viral

### epidemiology

#### **Suspected VHF in Sudan: Cases decline but not contained**

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World Health Organization. Regional Office for the Eastern Mediterranean - Communicable Diseases Prevention and Control - Pandemic and Epidemic Diseases

**Weekly Epidemiological Monitor** 2016; 09 (03): 1

**Keywords:** Hemorrhagic Fevers, Viral; Disease Outbreaks; Dengue; West Nile virus; Chikungunya virus

**Abstract:** The suspected cases of viral haemorrhagic fever [VHF] reported from Dar-fur region in Sudan continue to be re-reported sporadically. Although, cases have declined, there is yet no sign that the outbreak has been contained.

## Hepatitis B

### epidemiology

#### **Hepatitis B and C; prevalence in south Punjab population**

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**Professional Medical Journal-Quarterly [The]** 2016; 23 (1): 25-28

**Keywords:** Hepatitis C-epidemiology; Cross-Sectional Studies; Prevalence; Hepatitis, Viral, Human; Vaccination

**Abstract:** Background: Pakistan is a developing country of 180 million people with low health and educational standards. According to the Human Development Index of the United Nations, it is ranked 146[th] out of 187 countries. Objective: To know the actual disease burden of Chronic Hepatitis Viruses B and C in Southern Punjab. Study Design: Cross-sectional, Observational study. Setting: Ibn-e-Sina Hospital and Research Centre. Period: March 2010 to February 2014. Methodology: A total of 26800 people from general population were included in the present study. Free vaccination camps were established in rural and urban union councils with the help of local politicians, in Schools,

Madrassahs and Industrial units and a permanent camp was established in Ibn-e-Sina Hospital. People of all age groups and either sex were vaccinated. Results: A total of 26800 individuals were screened, [mean: 36.47 +/- 13.81]. 2090 [7.8%] tested positive for Anti-HCV. Among these 68.6% [n=1433] were males while 31.4% [n=657] were females. 616 [2.3%] tested positive for HBsAg of which 401 [65.2%] were male and 215 [34.8%] were female. 75 subjects [0.28%] were positive for both HBsAg and Anti-HCV. Conclusion: We as a community need to be more vigilant as the disease burden of HBsAg is not decreasing in the general population and the Burden of. Anti-HCV is one of the highest in the world.

## Hepatitis B Vaccines

### **A longitudinal cohort study of the D relationship between Thimerosal-containing hepatitis B vaccination and specific delays in development in the United States: Assessment of attributable risk and lifetime care costs**

Geier, David A.; Kern, Janet K.; Hooker, Brian S.; King, Paul G.; Sykes, Lisa K.; Geier, Mark R  
Institute of Chronic Illnesses

**Journal of Epidemiology and Global Health** 2016; 6 (2): 105-118

**Keywords:** Thimerosal; Cohort Studies; Risk; Ethylmercury Compounds

**Abstract:** Epidemiological evidence suggests a link between mercury [Hg] exposure from Thimerosal-containing vaccines and specific delays in development. A hypothesis-testing longitudinal cohort study [n = 49, 835] using medical records in the vaccine Safety Datalink [VSD] was undertaken to evaluate the relationship between exposure to Hg from Thimerosal-containing hepatitis B vaccines. [T-HBVs] administered at specific intervals in the first 6 months of life and specific delays in development [International Classification of Disease, 9th revision [ICD-9]: 315.xx] among children born between 1991 and 1994 and continuously enrolled from birth for at least 5.81 years. Infants receiving increased Hg doses from T-HBVs administered within the first month, the first 2 months, and the first 6 months of life were significantly more likely to be diagnosed with specific delays in development than infants receiving no Hg doses from T-HBVs. During the decade in which T-HBVs were routinely recommended and administered to US infants [1991-2001] an estimated 0.5-1 million additional US children were diagnosed with specific delays in development as a consequence of 25 jg or 37.5jg organic Hg from T-HBVs administered within the first 6 months of life. The resulting lifetime costs to the United States may exceed \$1 trillion.

## Hepatitis C, Chronic

### **Chronic hepatitis C; "APRI score a noninvasive marker, its predictive value for determination of hepatic fibrosis and liver cirrhosis at tertiary care hospital Hyderabad/ Jamshoro"**

Rind, Muhammad Salim; Shah, Muhammad Iqbal; Suthar, Ramesh Kumar; Jahangir, Syed

**Professional Medical Journal-Quarterly [The]** 2016; 23 (1): 50-55

**Keywords:** Liver Cirrhosis; Tertiary Care Centers; Cross-Sectional Studies; Biopsy

**Abstract:** The major causative factor of hepatic cirrhosis and its complications in chronic hepatitis C is due to presence of liver fibrosis. To assess prognosis and management related decisions, the exact staging of liver fibrosis is of greatest importance. Now, liver biopsy is the inexact gold standard for this purpose. APRI or AST to platelet ratio Index is the best noninvasive marker which can predict presence of fibrosis in majority of chronic hepatitis C patients without the need of biopsy. It is also cost effective and only depends on routine testing [Platelet count and serum AST]. Objectives: To determine the positive predictive value of APRI Score for the prediction of fibrosis and cirrhosis in chronic hepatitis C patients. Study design: Cross sectional study. Setting: Medical wards and Out Patient Medicine Department of Liaquat University Hospital Hyderabad / Jamshoro. Period: 6 months. Methodology: A total of 51 patients of either gender, age. >14 years presenting to Medical wards and OPD for the evaluation of chronic hepatitis were enrolled in this research study after giving preference and avoiding criteria. Clinical data was collected at the time of liver biopsy and blood samples for liver function tests, blood glucose and complete blood picture with platelet count were collected before the biopsy [only AST and platelet count are needed for APRI score] a core biopsy needle of 14 gauge was used and the procedure was conducted under ultrasound guidance. Fibrosis stage was determined according to the METAVIR group scoring system. The patients were examined in a very comfortable manner and all the information collected from the patients was kept confidential and entered in the predesigned proforma. Results: A total of 51 patients were selected for this study. Out of these 31 [60.78%] were male and 20[39.22%] were female. The mean age was 42.53 years [+/- 11.2 SD]. The positive predictive value for APRI score between 0.5 to 1.0 was 58.82% whereas the positive predictive values for APRI score 1.1-1.5 was 70.58%. Conclusion: The positive predictive values of APRI score in the ranges of 0.5 to 1.5 were not indicative of the presence of significant liver fibrosis in this research study. However, additional data are required to authenticate or disprove the usefulness of APRI score for the prediction of significant hepatic fibrosis in chronic hepatitis C patients

## therapy

### Hep-net opinion about the management of patients with chronic hepatitis C in Pakistan in the era of available direct acting antivirals

Farooqi, Javed Iqbal; Alam, Altaf; Abbas, Zaigham; Naqvi, Altaf Baqir; Zuberi, Bader Faiyaz; Nawaz, Arif Amir; Khan, Anwaar A.; Hashmi, Zahid Yaseen; Chaudhry, Asad A.N.; Azam, Zahid; Salih, Muhammed; Bushra, A.N.; Siddiq, Masood; Kamani, Lubna; Zeeshan, N.; Haider, Aftab; Majid, Shahid

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**JPMI-Journal of Postgraduate Medical Institute** 2016; 30 (1): 6-14

**Keywords:** Antiviral Agents; Hepatitis C, Chronic-therapy; Disease Management; Coinfection

**Abstract:** In Pakistan, we have 4.9% prevalence of HCV in general population, with 79% genotype 3. Recently Sofosbuvir has been made available at compassionate price in Pakistan. Management of chronic hepatitis C includes counseling of HCV patients, their proper assessment to select those who need antiviral therapy, initiation of appropriate antiviral agents and duration of therapy, along-with careful monitoring for safety and efficacy. Hepatic status as well as previous history of HCV therapy needs to be taken in the consideration before starting antiviral therapy. Other factors include co-morbid conditions like obesity, DM, NASH, etc. Treatment of special populations like liver transplant patients, patients with HBV co-infection, chronic kidney disease and hemoglobinopathies need special considerations when initiating HCV therapy.

## Hepatolenticular Degeneration

### Synthesis and anti-intracellular Copper overload evaluation of Nanoconjugated D-penicillamine -Dendrimer in Wilson's model cells

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**Journal of Gorgan University of Medical Sciences** 2016; 18 (1): 114-119

**Keywords:** Penicillamine; Dendrimers; Copper

**Abstract:** Background and Objective: Wilson's disease [WD] is caused by mutation to the cooer-transporting gene ATP7B. Chelation therapy is the main protochol of treatment for patients with Wilson's disease. D-penicillamine is one of the well-known chelator agants which is used in WD treatment but it cannot enter into the intracellular space. This study was done to evaluate the synthesis and. anti-intracellular Copper overload evaluation of Nanoconjugated D-penicillamine -Dendrimer in Wilson's model cells. Methods: In this descriptive-analytic study, initially 0.01 mm polyethylene glycol [PEG] and 0.0018 mm citric acid, Dendrimer was synthesized. After purification by dialysis bag and lyophilization, IOmg dendrimer was conjugated to 3.3mg D-penicillamine. Nanoconjugated D-penicillamine-dendrimer was injected on Wilson's model cells. After incubation and centrifugation intracellular measurement of copper concentration and FTIR test were done. Results: Copper accumulation significantly reduced in the HepG2 WD cell by Nanoconjugated D-penicillamine - Dendrimer in compared to D-penicillamine [P<0.05]. Copper accumulation was determined to be 46.61, MTT assay showed no toxicological damage in HepG2 WD cell. Conclusion: Nanoconjugated D-penicillamine -Dendrimer can reduces intracellular concentration ofCopper

## Hernia, Inguinal

### complications

#### Lleoileal knot as a content of obstructed hernia: what are the odds?

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (3): 238-240

**Keywords:** Hernia; Intestinal Obstruction

**Abstract:** An obstructed inguinal hernia is a common surgical emergency, which presents with a variety of contents like the small intestine, omentum, and colon. Intestinal knotting is a rare entity encountered in surgical practice; it

occurs when one coil of intestine wraps around the other and eventually leads to complications such as intestinal obstruction, ischemia, and gangrene. Both conditions are considered surgical emergencies and should be dealt with through appropriate surgical measures forthwith. We report the case of an obstructed inguinal hernia, which, on exploration, showed an ileoileal knot as its content. Ileoileal knotting is a very rare phenomenon and, to the best of our knowledge, such an ileoileal knot as a content of obstructed inguinal hernia has not been reported in the surgical literature so far.

## Hip Fractures

### **Dynamic hip screw [DHS] evaluation of stable and unstable intertrochanteric fracture of femur fixed**

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**Professional Medical Journal-Quarterly [The]** 2016; 23 (1): 76-80

**Keywords:** Femur; Incidence; Bone Screws

**Abstract:** Objectives: To analyze the comparative results of dynamic DHS fixation in stable and the unstable intertrochanteric fractures at LUH. Study Design: Comparative study. Setting: Orthopedic unit I of LUH Jamshoro. Period: 26<sup>th</sup> May 2010 - 25<sup>th</sup> August 2011. Methodology: All 40 patients with femur intertrochanteric fracture were enlisted. All cases isolated in 2 groups every having 20 patients, group A stable fracture and group B unstable fractures. After complete physical examination, examinations and fracture arrangement evaluation, patients were readied for operation. Fracture table was used in each operation. Fracture reduction was initially attempted by close manipulation and was successful in 30 [75%] cases. Lateral approach for proximal femur was used in every case. All fractures, whether stable or unstable, were reduced anatomically without any type of osteotomy and then fixed with 135o dynamic hip screw. Results: Mean age was 62.8.2 years of the cases. Gender ratio was 3:1. According to mode of injury were found RTA in 21 [70%] patients. Postoperative complications were recorded as; superficial infection noted in 2 [5%] patients and there was no case of deep infection. Average stay of hospital found 16.5 days in 17 [42.5%] patients belongs to stable group and 06 [15%] patients belong to unstable group. All [n=40] patients were pain free on their discharge from hospital. In all [n=40] patients we achieved union and there was no case of delayed union or non-union. We assessed functional outcome of our patients on the base of Stinchfield Hip Assessment system. According to SHAS 28 [70%] patients were excellent, 05 [12.5%] patients were good, 04 [10%] were fair and 03 [7.5] were poor. We had not found mortality in our patients. Conclusions: According to our conclusion DHS is the best implant for intertrochanteric fracture fixation. No matter; whether fracture is stable, unstable and fresh or old.

## Hospitals, Private

### **Assessment of private hospital portals: a conceptual model**

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**Journal of Health Management and Informatics [JHMI]** 2016; 3 (1): 1-9

**Keywords:** Models, Organizational; Data Collection; Surveys and Questionnaires

**Abstract:** Introduction: Hospital portals, as the first virtual entry, play an important role in connecting people with hospital and also presenting hospital virtual services. The main purpose of this article was to suggest a conceptual model to improve Tehran private hospital portals. The suggested model can be used by all the health portals that are in the same circumstances and all the health portals which are in progress. Method: This is a practical research, using evaluative survey research method. Research population includes all the private hospital portals in Tehran, 34 portals, and ten top international hospital portals. Data gathering tool used in this research was a researcher-made checklist including 14 criteria and 77 sub-criteria with their weight score. In fact, objective observation with the mentioned checklist was used to gather information. Descriptive statistics were used to analyze the data and tables and graphs were used to present the organized data. Also, data were analyzed using independent t-test. Conceptual modeling technique was used to design the model and demonstration method was used to evaluate the proposed model. In this regard, SPSS statistical software was used to perform the tests. Results: The comparative study between the two groups of portals, TPH and WTH, in the 14 main criteria showed that the value of t-test in contact information criteria was 0.862, portal page specification was -1.378, page design criteria -1.527, updating pages -0.322, general

information and access roads -3.161, public services -7.302, patient services -4.154, patient data -8.703, research and education -9.155, public relationship -3.009, page technical specifications. -4.726, telemedicine -7.488, pharmaceutical services -6.183, and financial services -2.782. Finally, the findings demonstrated that Tehran private hospital portals in criterion of contact information were favorable; page design criteria were relatively favorable; page technical specifications, portal page specification, public relationship, patient data, general information and access roads, and financial services were in inappropriate. Also, patient services, updating pages, public services, pharmaceutical services, research and education, and telemedicine were in a poor condition. Conclusion: Results of this study suggests that an appropriate model should contain 2 levels with 4 layers.

## Hyaluronic Acid

### pharmacology

#### **Efficacy of hyaluronic acid in the selection of human spermatozoa with intact DNA by the swim-up method**

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**Cell Journal [Yakhteh]** 2016; 18 (1): 83-88

**Keywords:** Spermatozoa; Semen; Apoptosis; DNA; Cohort Studies

**Abstract:** Objective: In 2014, enrolled 20 patients who applied to the Unit of Assisted Reproduction Techniques, Konya Necmettin Erbakan University. Based on the presence of hyaluronic acid [HA] in the oocyte-cumulus cell complex, sperm attached to HA in vivo were modeled in vitro. Available healthy sperm obtained in the swim-up procedure using HA were investigated. Materials and Methods: This observational cohort study, a routine analysis was conducted on the ejaculation samples obtained from 20 patients. We divided each sample into two groups and the swim-up method was applied. Human serum albumin [HSA, 0.5%] was added to samples from the first group. HA [10%] was added to samples from the second group. We determined the floating linear and non-linear sperm concentrations of both groups annexin V was used to determine the rate of apoptosis of these sperm. Results: Following swim-up, linear and non-linear sperm concentrations were higher in the group that contained HA compared to the group with HSA. However, there was a significantly higher apoptosis rate in the HSA group compared to the HA group. Conclusion: The addition of HA to the medium in the swim-up procedure positively affected sperm parameters. Thus, healthier sperm cells were obtained without DNA damage and with high motility.

## Hydatidiform Mole

### epidemiology

#### **Hydatidiform mole: a statistical survey in west of Iran**

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Hamadan University of Medical Sciences - Mother and Child Care Research Center

**JPMI-Journal of Postgraduate Medical Institute** 2016; 30 (1): 80-83

**Keywords:** Retrospective Studies; Pregnant Women; Gestational Trophoblastic Disease; Surveys and Questionnaires; Pregnancy

**Abstract:** Objective: To determine the incidence of hydatidiform mole in west of Iran. Methodology: This study was carried out on pregnant women referring for delivery in Hamadan province in west of Iran. We retrospectively evaluated medical records of all referring subjects to medical centers in Hamadan province between 1997 and 2006. All pregnant women referred to 11 referral hospitals as well as obstetric care facility centers in the province were studied. We recorded all cases with hydatidiform mole. Data Processing and statistical analysis were performed using SPSS version 16.0. Results: The incidence of hydatidiform mole in Hamadan province estimated 3.34 per 1000 pregnancies. Between 1997 and 2006. It means 1 per. 298.2 pregnancies had hydatidiform mole. The incidence rate of hydatidiform mole was considerably higher compared to reported from Japan, Turkey, Europe, USA, UK, China, Malaysia, whereas was lower than reported from Indonesia and India. The risk of recurrence rate of mole was higher than that reported in the UK, but lower than that shown in South Africa. Conclusion: The incidence of hydatidiform mole in Hamadan province of Iran seems to be high. Therefore early and rapid diagnosis of gestational tropho-blastic diseases in this region is strongly recommended.

## Hypertension

### epidemiology

#### Frequency of undiagnosed hypertension in patients presenting with stroke

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 250-253

**Keywords:** Stroke; Cross-Sectional Studies; Blood Pressure

**Abstract:** Objective: To determine the frequency of undiagnosed hypertension [HTN] in patients presenting with stroke. Study Design: Descriptive cross sectional study. Place and Duration of Study: Department of medicine, Combined Military Hospital [CMH] Kohat from June 2011 to June 2012. Material and Methods: A total of 190 patients with stroke were included in the study with non-probability, consecutive sampling. Written informed consent and demographics of patients were obtained and permission of the hospital ethical committee was taken. Detailed past history was obtained especially focusing on whether a known hypertensive patient or using any antihypertensive medication. All the patients were subjected to detailed physical examination. Blood pressure [BP] was measured by using standard mercury sphygmomanometer on two different occasions 10 minutes apart and the patient was labeled as hypertensive if both readings showed equal to or more than 140/90mmHg of blood pressure. Results: The mean age of patients was 46.31 +/- 15.30 years. There were 126 [66.3%] males and 64 [33.7%] females. The mean systolic BP of patients was 125.59 +/- 19.97mmHg while diastolic BP was 86.32 +/- 12.62 mmHg. In this study, there were 64 [33.7%] cases who had undiagnosed HTN before stroke. The difference was insignificant among different age groups and both genders [p-value>0.05]. Conclusion: The frequency of undiagnosed HTN is high in patients presenting with stroke which calls for a proper screening program to diagnose and treat HTN at early stage to prevent such deadly complications.

## Immunization

#### Childhood immunization; awareness among pregnant women in Pakistan

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**Professional Medical Journal-Quarterly [The]** 2016; 23 (1): 71-75

**Keywords:** Mortality; Pregnant Women; Cross-Sectional Studies; Mother-Child Relations; Knowledge; Awareness; Surveys and Questionnaires; Education

**Abstract:** Introduction: Childhood immunization remains one of the most important ways of preventing outbreaks of deadly diseases. Even with full-fledged active Expanded programme of immunization [EPI] initiated in Pakistan, the percentage of children getting vaccinated remain far below our required levels. Infant mortality in Pakistan is highest among SAARC countries, which at present stands at 70 deaths per 1, 000 live births, according to a report compiled by the Society for the Protection of the Rights of the Child [SPARC]. Objective: This study was carried out to assess mother's education, knowledge and level of awareness of childhood immunization among the pregnant women. Study design: Cross sectional descriptive study. Setting: Jinnah Medical and Dental College Karachi in department of community Health sciences [CHS]. Study period: April 2012 to June 2012. Methods: A total number of Four hundred pregnant. [400] women were interviewed in both OPDs and wards of Lady Dufferin Hospital and JMCH Karachi. The questionnaire contained a total of nineteen questions. All of them were self-asked in local language. Results: A significant number of child bearing women [81.5%] had good knowledge and aptitude about childhood immunization and are likely to get their children vaccinated. Conclusion: The higher the people are aware regarding childhood immunization, the more they are likely to get their children vaccinated. The level of awareness invariably correlated with the level of education of pregnant women. This tells us the literacy rate along with efficient immunization campaigns can help us fight against the war of high infant mortality rate against curable diseases.



### **Routine immunization services in Pakistan: seeing beyond the numbers**

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**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (3): 201-211

**Keywords:** Vaccination; Vaccines

**Abstract:** Vaccine-preventable diseases continue to be a major cause of morbidity and mortality among children under 5 years of age in Pakistan, and the country remains one of the last reservoirs of polio, posing a threat of viral spread within the region and globally. This structured review describes challenges in the achievement of vaccination targets and identifies arenas for policy and programmatic interventions and future research. Burdened with limited demand and inefficient vaccination services, the recently devolved Expanded Programme on Immunization [EPI] faces multiple hurdles in increasing immunization volumes, improving the quality of services and ensuring timely vaccination. The EPI requires multi-pronged, multi-level, coordinated interventions to improve programme functioning and to enhance vaccination uptake at community level. Additionally, a lack of rigorous scientific enquiry on vaccination services limits the introduction of well-developed, responsive interventions. The paper describes systemic bottlenecks, proposes potential solutions and suggests lines of further enquiry to understand and reduce the languishing immunization rates in Pakistan.

## In Vitro Oocyte Maturation Techniques

### **Effects of crocin supplementation during in vitro maturation of mouse oocytes on glutathione synthesis and cytoplasmic maturation**

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**IJFS-International Journal of Fertility and Sterility** 2016; 10 (1): 53-61

**Keywords:** Antioxidants; Oxidative Stress; Oocytes; Carotenoids-pharmacology; Mice; Glutathione

**Abstract:** Background: Crocin is an active ingredient of saffron [*Crocus sativus* L] and its antioxidant properties have been previously investigated. This carotenoid scavenges free radicals and stimulates glutathione [GSH] synthesis; consequently, it may protect cells against oxidative stress. The aim of this research is to protect oocytes from oxidative stress by the addition of a natural source antioxidant. Materials and Methods: In the present in vitro experimental study, we collected cumulus oocyte complexes [COCs] from mouse ovaries of euthanized, 6-8 week-old female Naval Medical Research Institute [NMRI] mice. Oocytes were subjected to in vitro maturation [IVM] in the presence of either crocin [5 or 10 microg/ml], 5 mM buthionine-[S-R]-sulfoximine [BSO], or the combination of crocin plus BSO. Oocytes that matured in vitro in a medium without crocin or BSO supplements were considered as controls. Following 16-18 hours of IVM, matured oocytes [n=631] were fertilized by capacitated sperm from NMRI male mice, and cultured in vitro for up to 96 hours to assess preimplantation embryonic development. The levels of GSH in metaphase II [MII] oocytes after IVM [n=240] were also assessed by the 5, 5-dithio-bis [2-nitrobenzoic acid] [DTNB]. -GSH reductase recycling assay. Results: Supplementation of IVM media with 10 microg/ml crocin significantly [P<0.05] increased nuclear maturation, preimplantation development and GSH concentrations compared with the control group. Maturation of oocytes in IVM medium supplemented with BSO alone or the combination of microg/ml crocin and BSO drastically decreased GSH concentrations and subsequently resulted in low rates of maturation, fertilization and blastocyst development. However, the combination of 10 microg/ml crocin with 5 mM BSO increased the level of nuclear maturation which was comparable to the control group. Conclusion: Supplementation of IVM media with crocin can improve nuclear maturation rates and subsequent developmental potential of mouse oocytes. This may occur by its beneficial effect in increasing GSH concentrations in MII oocytes.

## Infant Mortality

### **Neonatal mortality risk factors in Maraveh Tapeh County in Golestan province, north of Iran (2011-13)**

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**Journal of Gorgan University of Medical Sciences** 2016; 18 (1): 86-93

**Keywords:** Risk Factors; Surveys and Questionnaires; Case-Control Studies; Infant, Low Birth Weight; Infant, Premature; Infant, Newborn

**Abstract:** Background and Objective: Neonatal mortality rate is one of the most important health criteria, worldwide. Understanding the major neonatal mortality causes will help to plan for better pregnancy, prenatal and neonatal care systems. This study was conducted to determine the neonatal mortality risk factors in Maraveh Tapeh County in Golestan province, north of Iran. Methods: In this case-control study, according to either death or live in 28th day after birth, 52 neonates were considered as case group and 201 neonates were considered as control group. Data collection questionnaire were adjusted and completed for each neonate. Results: Neonatal mortality rate was 11.76, 13.36 and 6.46 per 1000 live birth in 2011, 2012 and 2013, respectively. Five main causes of death were prematurity, events, birth defect, respiratory distress syndrome and sepsis, respectively. There was a significant relation between death and prematurity, birth weight and gender [P<0.05]. There was relationship between birth weight and neonatal mortality. [Odds Ratio=29.6]. Conclusion: Prematurity and low birth weight were the most important causes of neonatal mortality in Maraveh Tapeh county in Golestan province, north of Iran.

## Inferior Wall Myocardial Infarction

### physiopathology

#### Frequency of high degree AV blocks in acute inferior myocardial infarction and their impact on clinical outcomes

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68- Medical Battalion

**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 281-284

**Keywords:** Atrioventricular Block; Outcome Assessment [Health Care]; Cross-Sectional Studies; Mortality

**Abstract:** Objective: To evaluate the frequency of high degree AV block in acute inferior wall myocardial infarction and to compare in hospital clinical outcomes in patients with inferior wall MI with and without AV Block. Study Design: Cross sectional descriptive study. Place and Duration of Study: Study was carried out at Armed Forces Institute of Cardiology, National Institute of Heart Diseases [AFIC-NIHD] Rawalpindi from Nov 2011 to June 2012, on patients admitted with acute inferior ML. Patients and Methods: Standard 12 lead ECG was recorded immediately after admission. Diagnosis of acute inferior wall MI was made in the presence of ST elevation >0.1 mv [1mm] in two or more of leads II, III and aVF. Continuous bed side cardiac monitoring was carried out. Two groups were made out of 193 patients. GROUP A [AVB+]=Patients having acute inferior wall infarction with AV block, GROUP B [AVB-]Patients having acute inferior wall infarction without AV block. Each group was compared for different variables. Data analysis was done by SPSS 17 statistical software. Results: AVB was found in 54 of 193 patients with inferior wall MI [28%]. Five patients [9.25%] of group A and 2 patients [1.43%] of group B died during hospital stay showing significantly higher mortality in patients with AVB [p=0.009]. Conclusion: Heart blocks are frequent among patients with inferior wall MI and are accompanied with a variety of in hospital complications. These complications can be minimized by early recognition and timely management including interventions like temporary cardiac pacing.

## Infertility, Female

#### Immune aspects of female infertility

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**IJFS-International Journal of Fertility and Sterility** 2016; 10 (1): 1-10

**Keywords:** Female; Semen; Spermatozoa; Immunoglobulins; Immunity

**Abstract:** Immune infertility, in terms of reproductive failure, has become a serious health issue involving approximately 1 out of 5 couples at reproductive age. Semen that is defined as a complex fluid containing sperm, cellular vesicles and other cells and components, could sensitize the female genital tract. The immune rejection of male semen in the female reproductive tract is explained as the failure of natural tolerance leading to local and/or systemic immune response. Present active immune mechanism may induce high levels of anti-seminal/sperm antibodies. It has already been proven that iso-immunization is associated with infertility comprehensive studies with regards to the identification of antibody-targets and the determination of specific antibody class contribute to the development of effective immuno-therapy and, on the other hand, potential immuno-contraception, and then of course to complex patient diagnosis. This review summarizes the aspects of female immune infertility.

## Investigation of personality traits between infertile women submitted to assisted reproductive technology or surrogacy

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**IJFS-International Journal of Fertility and Sterility** 2016; 10 (1): 94-104

**Keywords:** Personality; Pliability; Happiness; Cross-Sectional Studies; Reproductive Techniques, Assisted; Sensation

**Abstract:** Background: Personality traits affect human relationships, social interactions, treatment procedures, and essentially all human activities. The purpose of this study is to investigate the personality traits -including sensation seeking, flexibility, and happiness - among a variety of infertile women who were apt to choose assisted reproductive technology [ART] or surrogacy. Materials and Methods: This is a cross-sectional study that was performed on 251 infertile women who visited Isfahan and Tehran Reproductive Medicine Center. These fertility clinics are located in Isfahan and Tehran, Iran. In this study, 201 infertile women who underwent treatment using ART and 50 infertile women who tended to have surrogacy were chosen by convenience sampling. Zuckerman's Sensation Seeking Scale Form V [SSS-V], Psychological Flexibility Questionnaire [adapted from NEO Personality Inventory-Revised] and Oxford Happiness Questionnaire [OHQ] were used as research instruments. All participants had to complete the research instruments in order to be included in this study. Data were analyzed by descriptive-analytical statistics and statistical tests including multivariate analysis of variance [MANOVA] and Z Fisher. Statistically significant effects were accepted for  $P < 0.05$ . Results: In the sensation-seeking variable, there was a meaningful difference between under-study groups [ $P < 0.001$ ]. Interaction between education, employment, and financial status was effective in happiness of infertile women underwent ART [ $P < 0.05$ ], while age, education and financial status were also effective in happiness of infertile women sought surrogacy [ $P < 0.05$ ]. A positive meaningful relationship was seen between sensation seeking and flexibility variables in both groups [ $P < 0.05$ ]. And a negative meaningful relationship was seen between sensation seeking and happiness in infertile women who sought surrogacy [ $P < 0.05$ ]. The difference in rate of relationship between sensation seeking and flexibility was meaningful in infertile women who sought either ART or surrogacy [ $P < 0.05$ ]. Conclusion: Sensations seeking as a personality trait is lower in infertile women who underwent treatment using ART compared women who tended to have surrogacy. This study shows that demographic variables are effective in happiness of infertile women. Also, there is a significant relation among sensation seeking, flexibility and happiness in infertile women.

Insulin

## chemical synthesis

### Suspension culture alters insulin secretion in induced human umbilical cord matrix-derived mesenchymal cells

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**Cell Journal [Yakhteh]** 2016; 18 (1): 52-61

**Keywords:** Diabetes Mellitus; Umbilical Cord; Mesenchymal Stromal Cells; Pancreas; Cell Culture Techniques

**Abstract:** Objective: Worldwide, diabetes mellitus [DM] is an ever-increasing metabolic disorder. A promising approach to the treatment of DM is the implantation of insulin producing cells [IPC] that have been derived from various stem cells. Culture conditions play a pivotal role in the quality and quantity of the differentiated cells. In this experimental study, we have applied various culture conditions to differentiate human umbilical cord matrix-derived mesenchymal cells [hUCMs] into IPCs and measured insulin production. Materials and Methods: In this experimental study, we exposed hUCMs cells to pancreatic medium and differentiated them into IPCs in monolayer and suspension cultures. Pancreatic medium consisted of serum-free Dulbecco's modified eagle's medium Nutrient mixture F12 [DMEM/F12] medium with 17.5 mM glucose supplemented by 10 mM nicotinamide, 10 nM exendin-4, 10 nM pentagastrin, 100 pM hepatocyte growth factor, and B-27 serum-free supplement. After differentiation, insulin content was analyzed by gene expression, immunocytochemistry [IHC] and the chemiluminescence immunoassay [CLIA]. Results: Reverse transcription-polymerase chain reaction [RT-PCR] showed efficient expressions of NKX2.2, PDX1 and INSULIN genes in both groups. IHC analysis showed higher expression of insulin protein in the hanging drop group, and CLIA revealed a significant higher insulin production in hanging drops compared with the monolayer group following the glucose challenge test. Conclusion: We showed by this novel, simple technique that the suspension culture played an important role in differentiation of hUCMs into IPC. This culture was more efficient than the conventional culture method commonly used in IPC differentiation and cultivation.

## Intellectual Disability

### **Patriarchy in family care-giving: experiences of families of children with intellectual disability in Pakistan**

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**JPMI-Journal of Postgraduate Medical Institute** 2016; 30 (1): 73-79

**Keywords:** Family Characteristics; Surveys and Questionnaires; Caregivers; Parents; Family; Child

**Abstract:** Objective: To know the effects of children with intellectual disability [ID] on families in Pakistan with special focus on the experiences of mothers living in nuclear and joint families. Methodology: This was qualitative study in which qualitative methods were employed for this study. Data was collected from parents and family members of children with intellectual disability. Participants from the diverse socio-economic features were selected from the three rehabilitation centres for children with intellectual and physical disability in Peshawar and Haripur districts of Khyber Pakhtunkhwa province. A total of 58 respondents were interviewed including 30 in-depth individual interviews [IDs] with parents having children with ID and 4 Focus Group Discussions [FGDs] with a total of 28 parents [7 participants in each FGD]. Both mothers and fathers participated in this study for ensuring equal gender ratio. Results: Women in the families were suffering more as compared to men due to socially assigned role of primary care of the children. Women were facing social exclusion, stress/ fatigue due to role strain, rejection in the form of family breakdown and work-family conflict due to gender imbalance in role performances. Moreover, families were also prone to displacements and social hazards like beggary, child labour and drop out of normal female children from schools due poor institutional role in child support and rehabilitation. Conclusion: Patriarchy promotes uneven distribution of roles for men and women in the families having children with ID which causes more agonies for mothers and other female members of the house as compared to male members of the family.

## Intensive Care Units, Neonatal

### **Risk factors for neonatal intensive care unit admission in Amman, Jordan**

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Undergraduate Medical Education

**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (3): 163-174

**Keywords:** Risk Factors; Infant, Newborn; Surveys and Questionnaires; Cohort Studies; Retrospective Studies; Prospective Studies; Gestational Age

**Abstract:** A better understanding of risk factors for neonatal intensive care unit [NICU] admission can inform interventions to improve neonatal survival. This study aimed to describe a population of newborns admitted to a NICU in Amman Jordan, and compare them with newborns discharged to home. Newborns born within 96 hours at Al-Bashir Hospital were enrolled from February 2010 to June 2011. Demographic and clinical data were collected for mothers and newborns. Of 5466 enrolled neonates, 373 [6.8%] were admitted to the NICU. The median gestational age of NICU infants was 36 weeks, median birth weight was 2.2 kg and 49.5% were delivered by non-elective caesarean section. Lower gestational age, lower birth weight, delivery by caesarean section and birth in the month of May were statistically significant risk factors for NICU admission. Risk factors for NICU admission were consistent with other populations worldwide; however, median gestational age and birth weight were higher than in developed countries.

## Lactase

### **genetics**

#### **The Frequency of the LCT\*13910CT polymorphism associated with lactase persistence diverges among Euro-descendant groups from Brazil**

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**Medical Principles and Practice** 2016; 25 (1): 18-20

**Keywords:** Lactase-Phlorizin Hydrolase; Polymorphism, Genetic; Intestine, Small; Lactose Intolerance; Genes

**Abstract:** Objective: The aim of this study was to investigate the frequency of the LCT\*-13910C>T polymorphism associated with a high expression of lactase in the small intestine during adulthood, and to infer the lactase persistence and adult-type hypolactasia phenotypes among Euro-Brazilians and Mennonites from South Brazil. Materials and Methods: A sequence-specific PCR method to genotype the LCT\*-13910C>T polymorphism in 292 Euro-Brazilians and 151 Mennonites [a group with European ancestry and a long history of endogamy] was developed. Using an exact test of population differentiation, the genotype and allele frequency between these and other Brazilian populations were compared. Results: The frequency of -13910\*T was significantly higher among the Mennonites when compared to the Euro-Brazilian cohort [0.63 vs. 0.33,  $p < 0.000001$ ]. Accordingly, Mennonites had a higher prevalence of the lactase persistence genotype [88.1 vs. 55.5%,  $p < 0.000001$ ]. The distribution of -13910\*T differed between Mennonites and all other Brazilian groups [ $p < 0.0001$ ]. The Euro-Brazilians from Curitiba displayed differences when compared to all other Brazilian groups [ $p < 0.0001$ ], even to Euro-Brazilians from a different geographic region [ $p = 0.0003$ ], but were similar to those from Porto Alegre [ $p = 0.2$ ]. Conclusion: Differences in the -13910\*T-associated lactase persistence distribution among Euro-Brazilian groups reflect the ancestry and admixture of each particular group and should be considered for adult-type hypolactasia screening.

## Lactobacillus acidophilus

### Evaluation of anti-microbial activity of Lactobacillus acidophilus and Lactobacillus ruteri against entero-pathoges by in vitro and in vivo methods

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Journal of Gorgan University of Medical Sciences 2016; 18 (1): 45-52

**Keywords:** Lactobacillus ruteri; In Vitro Techniques; Probiotics; Enterobacteriaceae Infections; Anti-Infective Agents; Mice

**Abstract:** Background and Objective: Probiotics are beneficial organisms therapeutic within microbial flora. Shigella, Escherichia coli and Salmonella are the most common cause of intestinal infectious diseases that lead to morbidity and mortality in infant and children worldwide. The aim of this study was to evaluate. anti-microbial activity of Lactobacillus acidophilus and Lactobacillus ruteri against entero-pathoges by in vitro and in vivo methods. Methods: In this experimental study, the therapeutic effect of the lactobacillus acidophilus ATCC 4356 and ruteri ATCC 23272 against Shigella sonnei ATCC 9290, Escherichia coli ATCC 25922 and Salmonella enterica BAA-708 were evaluated by in vitro [spot agar] and in vivo [BALB/c mice] methods. Weight improvement and survival rate in mice were recorded. Results: Lactobacillus acidophilus and ruteri had protective and therapeutic effect against diarrhea caused by pathogenic bacteria. Probiotics reduced the weight, colonization of pathogens and increased the survival rate of animals [ $P < 0.05$ ]. Conclusion: Lactobacillus acidophilus and ruteri has anti-microbial activity and their consumption can be effective in the prevention and also the treatment of intestinal disease.

## Language Tests

### Evaluating the English language scientific writing skills of Saudi dental students at entry level

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EMHJ-Eastern Mediterranean Health Journal 2016; 22 (2): 148-153

**Keywords:** Students, Dental; Cross-Sectional Studies; Writing

**Abstract:** Better knowledge is needed about the effectiveness of preparatory English language courses for the health professions. This study evaluated the scientific writing skills of students finishing their preparatory year of a bachelor of dentistry programme in Saudi Arabia. A cross-sectional study was conducted in. 2014-15 among first-year dental students at the University of Dammam. Students were asked to write a 150-word English language assignment that was analysed for writing statistics and problems using Microsoft Word and plagiarism detection software. Of the 89 respondents, female students used a significantly greater number of words than did male students and their assignments had significantly lower Flesch reading ease scores. Male students had significantly lower odds of using references [OR 0.04] and higher odds of making punctuation and grammar mistakes [OR 2.63 and 3.91 respectively]. One course of scientific writing in the preparatory year may not be enough to develop adequate writing skills among undergraduate dental students.

## Lasers, Solid-State

**Surface treatment by different parameters of erbium:yttrium-aluminum-garnet [Er:YAG] laser: scanning electron microscope [SEM] evaluation**

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**Journal of Lasers in Medical Sciences** 2016; 7 (1): 37-39

**Keywords:** Electron Microscope Tomography; Tooth; Dentin

**Abstract:** Introduction: This study aimed to assess the Scanning Electron Microscope [SEM] analysis of tooth surface irradiated by erbium:yttrium-aluminum-garnet [Er:YAG] laser with various parameters. Methods: Number of 25 extracted human third molars free of caries were used in this study. The teeth were put into 5 groups for laser irradiation as follows: group 1 [power: 0.5 W, Energy: 50 mj]; group 2 [power: 1 W, Energy: 100 mj]; group 3 [power: 1.5 W, Energy: 150 mj]; group 4 [power: 2 W, Energy: 200 mj]; group 5 [power: 2.5 W, Energy: 250 mj]. All samples were prepared by repetition rate of 10 Hz and duration of 230 us, using a non-contact handpiece at a distance of 4 mm. Then, the samples were prepared for SEM examination. Results: SEM evaluation of every 25 samples, treated by Er:YAG, showed that all groups had exposed dentinal tubules without any melted area or cracks. Conclusion: In this study we used SEM to investigate ablated dentine with different parameters of Er:YAG laser energy. Our findings support these conclusions. All powers of laser below 3 W are proper for ablation, and make no cracks.

## Learning

**Assessment of medical students' learning and study strategies in self-regulated learning**

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**Journal of Advances in Medical Education and Professionalism** 2016; 4 (2): 72-79

**Keywords:** Students, Medical; Educational Measurement; Cross-Sectional Studies; Surveys and Questionnaires

**Abstract:** Introduction: Research on medical students shows that adopting self-regulation of effort, time, and study strategies can positively influence academic achievement. The purpose of the current study was to assess learning and study strategies in medical students. Methods: This cross-sectional study was carried out in 2014-2015 at Isfahan University of Medical Sciences. The sample size was determined 360 students based on the results of a pilot study on 30 members of the study population. Medical students in the first to fourth year of their studies were selected through simple sampling randomly. A valid and reliable Persian translation of Learning and Study Strategies Inventory [LASSI] questionnaire was completed by the students. It measures three latent factors of self-regulated learning: Skill, Will, and Self-Regulation. It consists of 80 questions in ten different scales [each scale including eight questions and a variable score of 8-40]. Data were analyzed using t-test, correlation analysis, and ANOVA. Results: Considering the ten LASSI scales, the highest mean score belonged to test strategies [28.67 +/- 4.44], and the lowest mean to self-testing [21.91 +/- 4.91]. The results showed significant statistical differences between male and female students in selecting the main idea, attitude, and self-testing. ANOVA and post hoc Tukey tests showed a significant difference between the mean scores of different areas of LASSI among students with different grade point average [GPA] in the university. In all areas except the study aids, the mean scores of students with GPA higher than 17.5 were significantly higher than those of students with GPA lower than 14.5. Conclusion: The results showed that students need help and consultation in most areas of learning and study strategies. Using 10 areas of LASSI can determine the strengths and weaknesses of students in various areas. Knowing their own limitations, students will be able to improve their study habits. Hence, it is suggested to evaluate the students when enrolling at universities and design educational programs based on the students' characteristics.

**Core components of clinical education: a qualitative study with attending physicians and their residents**

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**Journal of Advances in Medical Education and Professionalism** 2016; 4 (2): 64-71

**Keywords:** Hospitals, Teaching; Surveys and Questionnaires; Students, Medical; Education, Medical; Evaluation Studies as Topic; Curriculum

**Abstract:** Introduction: In medical education, particularly in residency courses, most of the training occurs in real clinical environments. Workplace-based learning profoundly affects students' knowledge, attitudes, and practice; therefore, it should be properly planned. Due to the extensiveness of the clinical environment and its importance in

training residents, investigating how residents learn in these environments and detecting factors that influence effectiveness will help curriculum designers to promote residents' learning by improving their learning environment. Therefore, our qualitative content analysis study, aimed to examine the experiences and perspectives of internal and surgical residents and their attending physicians about learning in clinical settings. Methods: This qualitative content analysis study was conducted through purposeful sampling. Semi-structured interviews were conducted with 15 internal and surgical residents and 15 of their attending physicians at educational hospitals of Tehran University of Medical Sciences. Results: The main categories explored in this study were hidden curriculum, learning resources, and learning conditions. In the context of clinical environment and under its individual culture, residents learn professionalism and learn to improve their communication skills with patients and colleagues. Because of clinical obligations such as priority of treating the patients for education or workload of the attending physicians, residents acquire most of their practical knowledge from colleagues, fellows, or follow-up patients in different learning conditions [such as: educational rounds, morning reports and outpatient clinics] They see some of their attending physicians as role models. Conclusion: Changing cultural and contextual factors is of prime importance to promote a learning-oriented environment in a clinical setting. The present findings will help curriculum planners and attending physicians to improve residents' learning by means of appropriate workplace planning and by considering the components involved in clinical learning.

### **The effect of web quest and team-based learning on students' self-regulation**

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**Journal of Advances in Medical Education and Professionalism** 2016; 4 (2): 80-87

**Keywords:** Nursing; Students; Internet; Surveys and Questionnaires; Students, Medical; Education, Medical

**Abstract:** Introduction: In this study, the authors aimed to examine the effects of cooperative learning methods using Web Quest and team-based learning on students' self-direction, self-regulation, and academic achievement. Methods: This is a comparative study of students taking a course in mental health and psychiatric disorders. In two consecutive years, a group of students were trained using the Web Quest approach as a teaching strategy [n=38], while the other group was taught using team-based learning [n=39]. Data gathering was based on Guglielmino's self-directed learning readiness scale [SDLRS] and Buford's self-regulation questionnaire. The data were analyzed by descriptive test using M [IQR], Wilcoxon. signed-rank test, and the Mann-Whitney U-test in SPSS software, version 13.  $p < 0.05$  was considered as the significance level. Results: The results of the Mann-Whitney U test showed that the participants' self-directed [self-management] and self-regulated learning differed between the two groups [ $p = 0.04$  and  $p = 0.01$ , respectively]. Wilcoxon test revealed that self-directed learning indices [self-control and self-management] were differed between the two strategies before and after the intervention. However, the scores related to learning [students' final scores] were higher in the WebQuest approach than in team-based learning. Conclusion: By employing modern educational approaches, students are not only more successful in their studies but also acquire the necessary professional skills for future performance. Further research to compare the effects of new methods of teaching is required.

## Leishmaniasis

### **etiology**

#### **Inter- and intraspecific variations of leishmania strains isolated from patients with cutaneous and visceral leishmaniases in pars province, south of Iran**

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (3): 209-216

**Keywords:** Leishmaniasis, Cutaneous; Genetic Variation; Leishmania; Leishmaniasis, Visceral

**Abstract:** Background: Cutaneous and visceral leishmaniases are present in Fars Province in the south of Iran. The current study aimed to evaluate the inter- and intragenic diversities of Leishmania species isolated from patients with leishmaniasis in Fars Province, using PCR-based analyses and DNA sequencing of the N-acetylglucosamine-1-phosphate transferase [nagI] gene. Methods: Clinical samples were taken from the skin lesions of 120 individuals with clinical suspicion of cutaneous leishmaniasis [CL] referred to the major health centers of Shiraz. Along with microscopic examination, a part of each sample was used for in vitro cultivation. DNA was extracted from the cultured parasites and the nagI gene was PCR-amplified. For RFLP analysis, the PCR product of the nagI gene was digested with the AclI restriction enzyme. Moreover, the PCR products of 23 isolates were sequenced and analyzed, using MEGA5. Results: From the 120 patients with clinical suspicion of CL, 110[91.7%] cases were found to be positive by direct microscopy while 77[64.1%] of the cultures were positive. Digestion of the PCR product with the AclI restriction

enzyme detected *L. major* in 57 out of the 77 [74.1%] and *Z. tropica*, in 20 out of the 77 [25.9%] cases with CL. Phylogenetic analysis grouped the *Leishmania* isolates into 3 main clades, representing *L. major*, *L. infantum*, and *L. rop/ca*, encompassing 2, 2, and 2 haplotypes, respectively. Within the clades, the *L. tropica* intraspecies divergence was more pronounced in *L. major*. Conclusion: The findings of this study demonstrated that the causative agent of CL in Fars Province was mainly *L. major* and that there was considerable heterogeneity between the *Leishmania* species and also within the *L. major* isolates.

## Leukemia, Lymphocytic, Chronic, B-Cell

### genetics

#### **Dicer gene expression as a prognostic factor in acute lymphoblastic leukemia and chronic lymphocytic leukemia in pars province**

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (3): 223-229

**Keywords:** DEAD-box RNA Helicases; Gene Expression; Precursor Cell Lymphoblastic Leukemia-Lymphoma; Ribonuclease III; Cross-Sectional Studies; MicroRNAs

**Abstract:** Alterations in the expression of microRNAs [miRNAs] have been proposed to play a role in the pathogenesis of acute lymphoblastic leukemia [ALL] and chronic lymphocytic leukemia [CLL]. Dicer is one of the main regulators of miRNA biogenesis, and deregulation of its expression has been indicated as a possible cause of miRNA alterations observed in various cancers. Our aim was to analyze the expression of the Dicer protein and its relationship with ALL and CLL. This cross-sectional study was performed from 2010 to 2012 in Shahid Faghihi Hospital, Shiraz, Iran. In this study, 30 patients with CLL, 21 patients with ALL, 10 child healthy donors, and 19 adult healthy donors were recruited. The patients' samples were checked via flow cytometry, immunohistochemistry, and immunocytochemistry. The controls' samples were also examined in the hematology ward. Total RNA was extracted from the bone marrow and peripheral blood samples of the patients and controls. Then, reverse-transcription polymerase chain reaction was used to estimate the level of Dicer miRNA. The outcomes of the expression analysis of Dicer revealed statistically significant differences between the ALL patients/child healthy controls [mean $\pm$ SD, 0.19  $\pm$  0.28 vs. 0.73  $\pm$  0.12;  $P < 0.001$ ] and the CLL patients/adult healthy controls [mean  $\pm$  SD, 0.24  $\pm$  0.25 vs. 0.41  $\pm$  0.28;  $P = 0.033$ ]. This is the first piece of evidence showing that the expression of the Dicer gene greatly decreased in the patients with ALL in comparison to the child controls. The expression of the Dicer gene was also downregulated in the patients with CLL compared to the adult controls. Given the above findings, the expression of Dicer may play an important role in the progression and prognosis of these diseases.

## Leukemia, Myeloid, Acute

#### **Characterization of common chromosomal translocations and their frequencies in acute myeloid leukemia patients of northwest Iran**

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**Cell Journal [Yakhteh]** 2016; 18 (1): 37-45

**Keywords:** Translocation, Genetic; Geography; Ethnic Groups; Reverse Transcriptase Polymerase Chain Reaction

**Abstract:** Objective: Detection of chromosomal translocations has an important role in diagnosis and treatment of hematological disorders. We aimed to evaluate the 46 new cases of de novo acute myeloid leukemia [AML] patients for common translocations and to assess the effect of geographic and ethnic differences on their frequencies. Materials and Methods: In this descriptive study, reverse. transcriptase-polymerase chain reaction [RT-PCR] was used on 46 fresh bone marrow or peripheral blood samples to detect translocations t [8; 21], t [15; 17], t [9; 11] and inv [16]. Patients were classified using the French-American-British [FAB] criteria in to eight sub-groups [M0-M7]. Immunophenotyping and biochemical test results of patients were compared with RT-PCR results. Results: Our patients were relatively young with a mean age of 44 years. AML was relatively predominant in female patients [54.3%] and most of patients belonged to AML-M2. Translocation t [8; 21] had the highest frequency [13%] and t [15; 17] with



2.7% incidence was the second most frequent. CD19 as an immunophenotypic marker was at a relatively high frequency [50%] in cases with t [8; 21] and patients with this translocation had a specific immunophenotypic pattern of complete expression of CD45, CD38, CD34, CD33 and HLA-DR. Conclusion: Similarities and differences of results in Iran with different parts of the world can be explained with ethnic and geographic factors in characterizations of AML. Recognition of these factors especially in other comprehensive studies may aid better diagnosis and management of this disease.

## Leukoencephalitis, Acute Hemorrhagic

### Acute hemorrhagic leukoencephalitis in children: a case report

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (3): 245-248

**Keywords:** Demyelinating Diseases

**Abstract:** Acute hemorrhagic leukoencephalitis [AHLE] is a rare demyelinating disease characterized by an acute rapidly progressive fulminant inflammation of the white matter. In this case report, we introduce a case of AHLE in children with an interesting and lengthy process and successful treatment. A previously healthy 13-year-old girl was admitted to the hospital because of fever and loss of consciousness. After 4 days, she was referred to our pediatric intensive care unit in Mashhad, Iran. On admission, she had right-sided parotiditis. With a diagnosis of AHLE, our patient was treated with methylprednisolone, intravenous immunoglobulin, acyclovir, and plasmapheresis. AHLE is a rare and severe demyelinating disease, the mortality and morbidity of which can be decreased by early detection and treatment with steroid therapy, intravenous immunoglobulin, acyclovir, and plasmapheresis.

## Levofloxacin

### pharmacology

#### The effects of levofloxacin on testis tissue and spermatogenesis in rat

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**Cell Journal [Yakhteh]** 2016; 18 (1): 112-116

**Keywords:** Testis; Spermatogenesis; Rats, Wistar; Levofloxacin-therapeutic uses

**Abstract:** Levofloxacin is one of the Fluroquinolone antibiotic groups, which affect on controlling infections, especially in reproductive organs. It has therapeutic use in numerous countries, but little information exists on the effects of Levofloxacin on spermatogenesis when it is used for infectious treatment. The current study was designed to determine whether Levofloxacin influences testis tissue and spermatogenesis in rats. In this survey 50 male Wistar rats 6-8 weeks [250 +/- 10 g] were used: normal saline as sham and control groups and 3 treatment groups [0.03, 0.06 and 0.08 mg Levofloxacin/kg body weight] during 60 days. The experimental groups were daily gavages. After 60 days, they were anesthetized with ether and testes were taken for histopathology studies, sperm parameters evaluation and several hormone concentrations. Although testosterone concentration was not affected by Levofloxacin levels, follicle stimulating hormone [FSH] and luteinizing hormone [LH] concentration significantly increased by Levofloxacin consumption in 0.03 and 0.06 mg Levofloxacin/kg body weight groups [P<0.01]. Moreover, sperm concentration decreased linearly as Levofloxacin was increased [200, 192, 170, 128 and 75×10<sup>6</sup> sperm for control, sham, 0.03, 0.06 and 0.08 mg Levofloxacin/kg body weight, respectively, P<0.05]. Testis tissue cuts in experimental group when the amount dosage of Levofloxacin increased cells solidarity to the primary and secondary spermatogonia. Adding Levofloxacin linearly reduced spermatocyte cells and amount of all cells in semenifer pipes tube [P<0.05]. Levofloxacin as an antibiotic has histopathology effects on the spermatocyte cells, especially in high dose. Therefore, it might reduce fertility in male that requires further studies.

## Lidocaine

### therapeutic uses

#### **Lidocaine skin patch [Lidopat[registered] 5%] is effective in the treatment of traumatic rib fractures: a prospective double-blinded and vehicle-controlled study**

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**Medical Principles and Practice** 2016; 25 (1): 36-39

**Keywords:** Transdermal Patch; Rib Fractures; Pain; Double-Blind Method; Prospective Studies; Analgesia

**Abstract:** Objective: The purpose of this study was to determine the efficacy of the Lidopat[registered] 5% skin patch in relieving rib fracture pain. Subjects and Methods: From June 2009 to May 2011, 44 trauma patients with isolated rib fractures were enrolled in this study and randomized in a double-blind method into 2 groups. The experimental group [group E: 27 patients] used a Lidopat[registered] 5% skin patch at the trauma site and took an oral analgesic drug for pain relief. The placebo group [group P: 17 patients] used a placebo vehicle patch and an oral analgesic drug. Results: The mean age, weight and hospital stay of patients were 56.8 +/- 13.8 years, 67.4 +/- 12.6 kg and 6.34 +/- 1.3 days, respectively. In the first 4 days, there were no significant differences in pain scores between the groups [p > 0.05]. After the 5th day, the average pain score was significantly less in group E [mean 1.5] than in group P [mean 3.10; p < 0.05]. There was no significant difference in the number of fractured ribs between groups [p = 0.904]. The use of meperidine and the length of hospital stay [6.0 vs. 6.9 days] were both significantly less in group E [p = 0.043 and 0.009, respectively]. Conclusion: In this study, the use of the Lidopat[registered] 5% skin patch in patients with isolated rib fractures alleviated pain and shortened the hospital stay, and a lower dose of pain-relieving medication was used.

## Liver Abscess, Amebic

### diagnosis

#### **Simultaneous occurrence of amoebic liver abscess and cecal ameboma**

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**Journal of Infection and Public Health** 2016; 9 (3): 356-357

**Keywords:** Amebiasis; Abdominal Pain; Colonoscopy; Cecum-parasitology

## Liver Cirrhosis

#### **Decompensated cirrhosis; thyroid hormone levels in patients**

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**Professional Medical Journal-Quarterly [The]** 2016; 23 (1): 34-38

**Keywords:** Thyroid Hormones-blood; Prospective Studies

**Abstract:** Objective: The objective of the study is to find out, the levels of thyroid hormones in serum of the patients having decompensate cirrhosis and to determine the frequency of signs and symptoms of thyroid dysfunctions in such patients. Study design: Prospective descriptive study. Setting: All medical wards of Civil Hospital and Ojha campus, Dow University of Health Sciences, Karachi, Pakistan. Period: May 2013 to January 2015. Methodology: 76 patients having decompensated liver cirrhosis with various presentations, which were fulfilling the inclusion and exclusion criteria and were admitted in medical wards during the study period, were included in this study. Detailed history and examination of each case was performed. Thyroid hormone levels were performed along with other relative laboratory investigations and the results were obtained. Results: Out of 76 patients 58 patients had low serum T3 levels, whereas 18 had normal T3 levels. 65 patients had normal T4 levels and 11 had low serum T4 levels. The TSH levels were found normal in 74 patients and two patients had raised TSH levels. Conclusion: It is concluded that T3 levels is low in

cirrhotic patients but at the same time T4 and TSH levels remains normal in majority of cases and the patients remain euthyroid. As far as the clinical scenario is concern, no significance was found in the frequency of sign and symptoms of thyroid dysfunction. Most of the patients did not show signs and symptoms of hyper and hypothyroids.

### **Shear wave elastography; assessment of liver fibrosis in a patient of chronic liver disease associated infected by hepatitis B and C**

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**Professional Medical Journal-Quarterly [The]** 2016; 23 (1): 99-103

**Keywords:** Elasticity Imaging Techniques; Liver Diseases; Hepatitis B; Hepatitis C

**Abstract:** Objectives: Assessment of liver fibrosis by shear wave elastography in a patient of chronic liver disease associated infected by hepatitis B and C. Study Design: Observational Study. Place and Duration of Study: This study was conducted in the Department of Radiology JPMC Karachi from January to September 2015. Methodology: All the diagnosed cases of Chronic liver disease aged between 30 to 60 years and both gender associated with hepatitis B and C were selected. Patients using lipid-lowering drugs were excluded from this study. Assessment of liver fibrosis dividing into two groups, 1[st] group patients suffering liver disease since 2 years and 2[nd] group more than 2 years on SWE Qualitative and Quantitative analysis was done and staging of fibrosis according to METAVIR SCORE was done. Shear wave elastography and scoring are F0-F1 [5.3-7.1], F>2 [7.5-8.5] Grade 1-Mild, F>3 [9.5-13] Grade 2- Moderate and F>4 [13.1-18.8] Grade 3-Severe. Results: Out of the 80 patients, the majority was found to be male. 44[55%] males and 36[45%] females. Ratio between the male and female is 1.2:1. Mean age was found to be 44.57±7.54 years. Mostly Grade 2- Moderate changes observed in liver were 15[18.75%] of Hepatitis B Surface Antigen positive patients while 14[17.5%] Hepatitis C Virus Antibodies positive patients. Followed by Grade 1-Mild changes were 12[15%] of Hepatitis B+ve patients and 7[8.75%] Hepatitis C+ve positive patients. Grade. 3-Severe were 9[11.25%] of Hepatitis B+ve patients and 4[5%] Hepatitis C+ve positive [Table No 2]. 4[5%] cases observed mild changes in both positive. Conclusion: Elastography techniques is noninvasive method can provide clinicians with innovative options as potential alternatives to liver biopsy for improving the quality of care for those patients with liver diseases.

## Malaria

### **prevention and control**

### **A cross-sectional study assessing the residual bio-efficacy and durability of field-distributed long-lasting insecticidal nets in malaria endemic ethnic communities of Assam, Northeast India**

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**Journal of Infection and Public Health** 2016; 9 (3): 298-307

**Keywords:** Cross-Sectional Studies; Insect Vectors; Culicidae; Insecticides

**Abstract:** Long-lasting insecticidal nets [LLINs] are being promoted for malaria vector control in the northeastern Indian state of Assam. A cross-sectional study was conducted to assess the current residual bio-efficacy and durability of both the Olyset® and PermaNet®2.0 LLINs that were distributed earlier in 2009, 2011 and 2013 to help formulate informed policy regarding net procurement, supplies and replacement. The study was undertaken in three different malaria endemic blocks of Assam during the period of June to October of 2014. The residual bio-efficacies were ascertained using the WHO. cone-bioassay method for mosquito mortality post-exposure and corroborated with the ring-net assay for the median knockdown times of both types of LLINs in use by these communities. Cross-sectional community surveys were distributed to assess net ownership, utilization, community practices and the physical conditions of the nets in terms of being torn and the numbers of holes per position. Both the Olyset® and PermaNet®2.0 LLINs that were distributed in 2009 [i.e., nearly after five years of community usage] were completely torn, worn out and obsolete. However, the LLINs distributed in 2011 [i.e., three years of community usage] retained their residual bio-efficacies in susceptibility ranges that varied from 57% to 79%. However, for the LLINs that were distributed in 2013, the observed residual efficacy was adequate and resulted in a mosquito mortality rate >80 percent. Of the two types of LLINs inspected, the Olyset® nets were more durable and robust in terms of being torn less frequently [37.1%, 39/105] compared with the PermaNet®2.0 nets [51.8%, 204/394]. Regarding the LLINs that were distributed in 2013, all were physically intact and in good condition. The majority of the distributed LLINs [99.2%, 639/644] were still in the possession of the householders of the surveyed populations. This study revealed that the

serviceable life of the nets was slightly less than three years in terms of waning residual bio-efficacy and durability that warranted replacement. The communities were aware of the benefits of the use of mosquito net for personal protection and regularly used the nets; thus, LLIN-based interventions for sustained vector control should be scaled up.

## Malnutrition

### epidemiology

#### **Are lhws equipped enough to detect malnutrition in under-5 children? a kap survey of district Rawalpindi**

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**PJMR-Pakistan Journal of Medical Research** 2016; 55 (1): 20-24

**Keywords:** Cross-Sectional Studies; Community Health Workers; Surveys and Questionnaires; Child Nutrition Disorders

**Abstract:** Background: Malnutrition remains one of the major problems in developing countries including Pakistan. Despite raised awareness, there is little improvement in nutrition indicators in Pakistan, which calls for identification of the causes of stagnant rates. Objectives: To assess the proficiency of lady health workers [LHWs] to detect malnourishment in under-5 children using Salter scales and growth charts. Study design, settings and duration: Cross sectional study done in district Rawalpindi from May to August 2013. Subjects and Methods: Knowledge and skills of 59 LHWs related to growth charts were determined by cross-sectional method; and availability of tools were assessed by a short survey in district Rawalpindi. Results: None of the LHWs had growth chart while Salter-weighting scale was available with 34 [57.6%]. In knowledge assessment 78.8% LHWs scored good marks [above 80%] while 19.2% scored average. [60-79% marks]. Skills of LHWs related to child weighing were satisfactory but major deficiencies were noted regarding hanging the Salter-scale to stable support and tarring the scale-needle to zero reading. Conclusion: For timely identification of malnutrition in children, availability of Salter-weighting scales and growth charts must be ensured with the LHWs. Policy message: LHWs trainings should be updated with frequent trainings and refresher courses. They should be provided with updated materials like charts for Weight-for-Height and Mid-Upper Arm Circumference [MUAC] measuring tapes.

## Malondialdehyde

### blood

#### **Role of malondialdehyde in the serum of rheumatoid arthritis and osteoarthritis**

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**JPMI-Journal of Postgraduate Medical Institute** 2016; 30 (1): 58-61

**Keywords:** Arthritis, Rheumatoid; Osteoarthritis; Oxidative Stress

**Abstract:** Objective: To measure malondialdehyde in order to determine oxidative stress in rheumatoid arthritis and osteoarthritis subjects and comparing them with healthy individuals. Methodology Malondialdehyde estimation were done by using the UV-VIS spectrophotometer in the department of biochemistry SP medical college, Bikaner. Thiobarbituric acid assay method was used to estimate Malondialdehyde. Results: A statistically significant elevation of MDA level in serum of rheumatoid arthritis [RA] and osteoarthritis [OA] subjects was seen [ $p < 0.0001$ ]. The serum MDA level was also significantly increased in the subjects than in the controls. The serum MDA level was also significantly increased in the subjects than in the controls. Conclusion: Oxidative stress is due to increased free radical production which is the main mechanism in the pathogenesis of of RA and OA.

## Meals

### **Meals served to hypertensive and cardiac inpatients in Jordan: comparison with WHO and NIH dietary guidelines**

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**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (1): 28-33

**Keywords:** Hypertension; Heart Diseases; Nutrition Policy; World Health Organization; Inpatients

**Abstract:** This study aimed to evaluate the compliance of daily meals served to hypertensive and cardiac inpatients in Jordan according to WHO guidelines and the Therapeutic Lifestyle Changes [TLC] and Dietary Approach to Stop Hypertension [DASH] diets plans. Weekly cycle menus from the food service department of major hospitals in Jordan [n = 16] were analysed using ESHA Food Processor software to obtain data about macro-and micronutrient contents and food groups represented. The results showed inappropriate amounts of several nutrients in the menus provided, along with a general noncompliance with the DASH, TLC and WHO guidelines. Meals had higher than recommended sodium content coupled with low potassium content. Fatty acid profiles were often outside the recommended ranges. Meals provided to cardiac inpatients in Jordan need to be revised to meet the guidelines specified for the health conditions of these patients.

## Measles

### **epidemiology**

#### **Case-control study for measles outbreak in a tertiary care hospital**

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**PJMR-Pakistan Journal of Medical Research** 2016; 55 (1): 7-10

**Keywords:** Tertiary Care Centers; Measles Vaccine; Retrospective Studies; Risk; Case-Control Studies

**Abstract:** Objectives: To compare the profile of measles patients [cases] with non-measles [controls] admitted in Pediatric units of Civil Hospital, Karachi during the measles epidemic. Study type, settings and duration: Retrospective, case control, hospital record analysis of children admitted in pediatric units of Civil Hospital, Karachi from October 2012-March 2013. Subjects and Methods: From the list provided by the ward authorities, case records of children [cases] admitted in pediatric units of Civil Hospital, Karachi with the clinical diagnosis of measles were selected using convenient sampling. From the same wards, age and gender matched non-measles cases [controls] were also selected. The signs, symptoms, mortality and hospital stay of cases and controls were taken from the hospital record, while some information like socio-economic status, vaccination status, symptoms, number of days ill before presenting to health facility, health status of the child, history of similar illness in the family, neighbors, relatives and history of calamity in the area in recent past was taken from the parents or care givers telephonically. Sample size of 300 children [150 cases, 150 controls] was calculated. Results: Out of 150 children having measles, 84 [56%] were females. Most cases reported to health facility after a median of 8 days of onset of symptoms. Almost 98 [65%] children were vaccinated for measles and 52 [35%] were not vaccinated Median age of cases, vaccinated for measles was 30 months while median age of cases not vaccinated for measles was 21 months. All cases had history of fever and maculo-papular rash. Death occurred in 10 [7%] cases due to pneumonia. There was history of measles in their family in 90 [60%] cases, 54 [36%] had measles in neighbors and 30 [20%] in relatives. Out of 150 controls, 76 [51%] were vaccinated for measles and 74 [49%] were not vaccinated. The main reason for admission was pneumonia in 78 [52%] and bronchial asthma in 45 [30%]. The risk of measles was 0.83 times higher for cases who were vaccinated for measles as compared to controls who were vaccinated for measles. Using univariate analysis, symptoms of breathlessness and lower respiratory tract infection at the time of admission were significantly associated with measles disease. Using multivariate analysis, children between 9 to 60 months of age, presenting with breathlessness and lower respiratory tract infection had a significantly high chance of suffering from measles disease. Conclusion: Almost 65% who had received measles vaccination as per their mothers statement suffered from measles. Policy message: Measles outbreak occurring in many children despite getting measles vaccine needs further workup both for the timing of vaccination, actual verification of vaccination and its efficacy.

## Medical Errors

### **Medical error reporting: is it about physicians' knowledge and their practice, or patient safety culture in the workplace?**

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**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (3): 228-229

**Keywords:** Physicians; Health Knowledge, Attitudes, Practice; Patient Safety; Surveys and Questionnaires

## Meniere Disease

### **drug therapy**

#### **Unilateral Meniere's disease; intra tympanic injection of low dose gentamicin in the treatment**

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**Professional Medical Journal-Quarterly [The]** 2016; 23 (1): 93-98

**Keywords:** Gentamicins-therapeutic uses; Injection, Intratympanic

**Abstract:** ABSTRACT: Meniere's disease is chronic progressive disease with unclear idiopathic etiology and symptomatic improvements with treatment. Objectives: To analyze the efficacy of low dose intratympanic injection of gentamicin for vertigo control in unilateral Meniere's disease. Study Design: Quasi experimental study. Settings: Department of ENT, PIMS, NESCOM and IMDC Islamabad. Materials and Methods: Gentamicin was used intra tympanically in this multicentre study of 75 patients over a period of 8.5 years between 1<sup>st</sup> January 2005 to 30<sup>th</sup> June 2013 in definite Meniere's disease according to the 1995 Document of American academy of otolaryngology-Head and Neck Surgery [AAO-HNS]. All these centers followed same criteria and procedures. Single dose of 1 ml Gentamicin solution 40 mg/ml was instilled in the middle ear through the grommet under microscope and followed up for 3 months and two years. The staging of disease [hearing thresholds] the degree of disability [frequency of attacks per month] and the functional level were assessed before and after treatment. Results: Among 75 patients, 41 were female and 34 were males between age ranges of 25 to 70 years. Most of the patients in the study had stage 2 [23/75] and stage 3 [41/75] Meniere's disease. About 68[91%] patients were having good control of vertigo at the end of two year of intratympanic gentamicin without any loss of hearing. Conclusion: A single Low dose intratympanic gentamicin is effective in controlling vertigo in patients with Meniere's disease with no further deterioration in hearing for at least two years follow up.

## Meningioma

### **diagnosis**

#### **A retrospective analysis of meningioma in Central Texas**

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**Journal of Epidemiology and Global Health** 2016; 6 (2): 87-93

**Keywords:** Retrospective Studies; Meningioma-epidemiology; Risk Factors

**Abstract:** Documented meningioma cases in Central Texas [USA] from 1976 to 2013 were studied utilizing the Scott and White Brain Tumor Registry. All the cases examined were historically diagnosed as meningiomas. Of the 372 cases, most were benign benign tumors [ $p < 0.05$ ] A majority of the patients were females [ $p < 0.05$ ]. Elderly individuals [ $>45$  years of age] superseded the younger patients in meningioma incidence [ $p < 0.05$ ]. Previous data regarding meningioma epidemiology in Texas showed a higher incidence in black patients when compared to white patients. By contrast, this study's findings of Central Texas meningioma demographics show increased incidence of

meningiomas in white patients [ $p < 0.05$ ]. This interesting find in meningioma prevalence warrants further investigation with a larger sample size, in order to establish validity and further parse out possible causes of meningioma development among white individuals.

## Meningitis

### prevention and control

#### Control of meningitis in Sudan

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World Health Organization. Regional Office for the Eastern Mediterranean - Communicable Diseases Prevention and Control - Pandemic and Epidemic Diseases

**Weekly Epidemiological Monitor** 2016; 09 (05): 1

**Keywords:** Meningitis, Meningococcal-epidemiology; Neisseria meningitidis, Serogroup C; Disease Outbreaks

**Abstract:** Following the deployment implementation of mass preventive campaign with Conjugate-A vaccines [MenAfriVac] in Sudan in 2013, cases of meningococcal meningitis caused by Neisseria Meningitidis serogroup A [NmA] has decreased substantially in the country. However, , concerns remains on the possibility of outbreaks caused by new sero-group particularly serogroup C.

## Meningitis, Bacterial

### epidemiology

#### Trend of bacterial meningitis in Bahrain from 1990 to 2013 and effect of introduction of new vaccines

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**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (3): 175-182

**Keywords:** Pneumococcal Vaccines; Retrospective Studies; Streptococcus pneumoniae; Meningitis

**Abstract:** Meningitis is among the 10 commonest infectious causes of death worldwide. This retrospective analysis of reported cases of meningitis in Bahrain aimed to assess the trend in the incidence of bacterial meningitis from 1990 to 2013, before and after the introduction of new vaccines. Of 1455 reported cases of meningitis during the study period 73.1% were viral and 26.9% were bacterial etiology [tuberculous meningitis 8.3%; Streptococcus pneumoniae 4.9%, Haemophilus influenzae 3.6% and Neisseria meningitidis 1.7%]. There was a peak of meningitis cases in 1995-1996. The incidence of meningitis due to H. influenzae and N. meningitidis showed a marked reduction after the introduction of the corresponding vaccines in 1998 and 2001 respectively, and S. pneumoniae became the predominant organism after Mycobacterium tuberculosis. The changing trend in the etiology of bacterial meningitis points to the need to study vaccination programme modifications, such as pneumococcal vaccine for the adult population, especially high-risk groups.

## Meningococcal Infections

### epidemiology

#### Lifetime cost of meningococcal disease in France: Scenarios of severe meningitis and septicemia with purpura fulminans

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**Journal of Infection and Public Health** 2016; 9 (3): 339-347

**Keywords:** Meningitis, Meningococcal; Sepsis; Purpura Fulminans; Costs and Cost Analysis; Delivery of Health Care

**Abstract:** Invasive meningococcal disease [IMD] is life-threatening and can result in severe sequelae. In France, no data have been published on the costs of severe IMD cases. Two realistic scenarios were developed with national experts [clinicians and social workers]: a 6-year-old child with purpura fulminans with amputation of both legs below the knee [case A] and a 3-year-old with meningitis and severe neurological sequelae [case B]. Additional scenarios included other typical sequelae of IMD such as chronic kidney disease [CKD] profound deafness and epilepsy. Data on healthcare, disability, educational and other resource use were obtained from experts and families of patients with similar sequelae. Unit costs [2013] were mainly obtained from the literature and the National Health Insurance [NHI]. Time horizon was based on life expectancies of patients [77 and 55 years, respectively]. A 4% discount rate decreasing to 2% after 30 years was applied. Costs are presented from the perspective of the NHI, publicly funded organizations and patients' families or their private health insurances, purpura fulminans with amputations is associated with a lifelong discounted cost of €768, 875. Adding CKD doubles the amount [€ 1, 480, 545]. Meningitis with severe neuro-cognitive sequelae results in a lifelong discounted cost of €1, 924, 475. Adding profound deafness and epilepsy slightly increases the total cost [€2, 267, 251]. The first year is the most expensive in both scenarios [€166, 890 and €160, 647 respectively]. The main cost drivers for each scenario are prostheses and child/adult stays in healthcare facilities, respectively. Overall, patients' families or his private insurance had to pay around 13% of total cost [101, 833€ and 258, 817€, respectively]. This study fills a gap in the body of knowledge on IMD sequelae care and lifetime costs in France. The potentially high economic burden of IMD, in addition to its physical, psychological and social burden, reinforces the need for prevention.

## Mental Disorders

### nursing

#### **A comparative study of nurses as case manager and telephone follow-up on clinical outcomes of patients with severe mental illness**

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (1): 19-27

**Keywords:** Nurses; Telephone; Patient Outcome Assessment; Hospitalization; Caregivers

**Abstract:** Background: Providing community-based mental health services is crucial and is an agreed plan between the Iranian Mental Health Office and the Regional Committee for the Eastern Mediterranean [affiliated with WHO]. The aim of this study was to determine the effectiveness of home-visit clinical case-management services on the hospitalization rate and other clinical outcomes in patients with severe mental illness. Methods: A total of 182 patients were randomly allocated into three groups, namely, home-visit [n=60], telephone follow-up [n=61] and as-usual care [n=61] groups. Trained nurses as clinical case-managers provided home-visit services and the telephone follow-up tasks. Hospitalization rate as a measure of recurrence, as well as burden, knowledge, general health condition of caregivers with positive/negative symptoms, satisfaction, quality of life, and social skills of the consumers were assessed as the main and secondary outcomes, respectively. Results: Most clinical variables were improved in both intervention groups compared with the control group. During the one year follow-up, the rate of rehospitalization for the telephone follow-up and as-usual groups were respectively 1.5 and 2.5 times higher than the home-visit group. Conclusion: Trained clinical case-managers are capable of providing continuous care services to patients with severe mental illness. The telephone follow-up services could also have beneficiary outcome for the consumers, their caregivers, and the health system network.

## Mesenchymal Stromal Cells

#### **Comparison of the expression of hepatic genes by human Wharton's jelly mesenchymal stem cells cultured in 2D and 3D collagen culture systems**

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (1): 28-36



**Keywords:** Wharton Jelly; Cells, Cultured; Cell Culture Techniques; Collagen; Tissue Scaffolds; Hepatocytes; Liver; Genes

**Abstract:** Background: Human Wharton's jelly mesenchymal stem cells [HWJMSCs] express liver-specific markers such as albumin, alpha-fetoprotein, cytokeratin-19, cytokeratin-18, and glucose-6-phosphatase. Therefore, they can be considered as a good source for cell replacement therapy for liver diseases. This study aimed to evaluate the effects of various culture systems on the hepatocyte-specific gene expression pattern of naive HWJMSCs. Methods: HWJMSCs were characterized as MSCs by detecting the surface CD markers and capability to differentiate toward osteoblast and adipocyte. HWJMSCs were cultured in 2D collagen films and 3D collagen scaffolds for 21 days and were compared to control cultures. Real time. RT-PCR was used to evaluate the expression of liver-specific genes. Results: The HWJMSCs which were grown on non-coated culture plates expressed cytokeratin-18 and -19, alpha-fetoprotein, albumin, glucose-6-phosphatase, and claudin. The expression of the hepatic nuclear factor 4 [HNF4] was very low. The cells showed a significant increase in claudin expression when they cultured in 3D collagen scaffolds compared to the conventional monolayer culture and 2D collagen scaffold. Conclusion: Various culture systems did not influence on hepatocyte specific marker expression by HWJMSCs, except for claudin. The expression of claudin showed that 3D collagen scaffold provided the extracellular matrix for induction of the cells to interconnect with each other.

## Microbial Sensitivity Tests

### **Accuracy of the VITEK 2 system for a rapid and direct identification and susceptibility testing of Gram-negative rods and Gram-positive cocci in blood samples**

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**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (3): 193-200

**Keywords:** Gram-Positive Cocci; Gram-Negative Bacteria; Blood

**Abstract:** The performance of the VITEK 2 system for direct rapid identification and antimicrobial susceptibility testing of the bacteria responsible for blood infections was determined. The isolates studied included 166 Gram-negative rods and 74 Gram-positive cocci from inpatients. Specially treated monomicrobial samples from positive blood culture bottles were directly inoculated into the VITEK 2 system and the results were compared with those from cards inoculated with standardized bacterial suspensions. Compared with the standard method, 95.8% of Gram-negative rods were correctly identified by VITEK 2 and the overall level of agreement between the two methods in susceptibility testing was 92.0%. For Gram-positive bacteria, 89.2% were correctly identified by VITEK 2 and susceptibility testing revealed an overall agreement rate of 91.3%. These results suggest that VITEK2 cards inoculated with fluids sampled directly from positive blood culture bottles are suitable for speedy identification and susceptibility testing of Gram-negative bacilli and Gram-positive cocci.

## Microbiota

### **First microbiota assessments of children's paddling pool waters evaluated using 16S rRNA gene-based metagenome analysis**

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**Journal of Infection and Public Health** 2016; 9 (3): 362-365

**Keywords:** Metagenome; Genes, rRNA; Swimming Pools; Proteobacteria; Child

**Abstract:** Insufficient chloric sterilization of children's paddling pool waters increases the risk of diarrheal illness. Therefore, we investigated the micro-biota changes after children use pools. First, we applied 16S rRNA gene-based metagenome analysis to understand the dynamics of microbiota in pool water, especially with respect to the bio-contamination by potential pathogens. Proteobacteria were major taxa detected in every pool water sample after children spent time in the pool. In more detail, Gammaproteobacteria comprised the dominant class, which was followed by Betaproteobacteria. Five phyla, Bacteroidetes, Firmicutes, Actinobacteria and Deinococcus-Thermus phyla were minor groups. The pool water microbiota are likely to be a consortium of intestinal and skin microbiota from humans. Interestingly, the ratio of Gammaproteobacteria and Betaproteobacteria differed according to the age of the children who used the pool, which means the pool water was additionally contaminated by soil microbiota as a result of the children's behavior. Furthermore, potential pathogens, such as *Campylobacter* spp., *Comamonas testosteroni* and *Burkholderia pseudomallei*, were also found. Considering the standard plate counts, the abundances of these human pathogens are unlikely to be a sufficiently infectious dose. We suggest the importance of sanitary measures in paddling pool waters to reduce bio-contamination from both humans and the environment.

## Microcephaly

### Clusters of microcephaly and Guillain-Barré syndrome declared as PHEIC

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World Health Organization. Regional Office for the Eastern Mediterranean - Communicable Diseases Prevention and Control - Pandemic and Epidemic Diseases

**Weekly Epidemiological Monitor** 2016; 09 (06): 1

**Keywords:** Guillain-Barre Syndrome; Public Health; Emergencies; Zika Virus; Risk Factors

**Abstract:** On 01 February 2016, the Director-General of WHO declared that the re-cent cluster of microcephaly cases and other neurologic disorders reported in Brazil, following a similar cluster in French Polynesia in 2014, constitutes a Public Health Emergency of International Concern [PHEIC].

## Middle East Respiratory Syndrome Coronavirus

### Closing the knowledge gaps on MERS-CoV

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World Health Organization. Regional Office for the Eastern Mediterranean - Communicable Diseases Prevention and Control - Pandemic and Epidemic Diseases

**Weekly Epidemiological Monitor** 2016; 09 (04): 1

**Keywords:** Coronavirus Infections

**Abstract:** In recent time, WHO conducted a high-level mission to Saudi Arabia on Middle East respiratory syndrome coronavirus [MERS-CoV] from 11 to 14 January 2016. One of the objectives of the mission was to identify main areas of public health research to better address the remaining knowledge gaps on MERS which is continuing to haunt the global scientific communities since the detection of the virus in 2012

## isolation and purification

### MERS-CoV diagnosis: an update

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**Journal of Infection and Public Health** 2016; 9 (3): 216-219

**Keywords:** Real-Time Polymerase Chain Reaction; Serology; Sequence Analysis, RNA; Coronavirus Infections-diagnosis

**Abstract:** Diagnosis of MERS-Cov still a major concern in most of daignostic laboratories. To date the Real-time Polymerase Chain reaction [RT-PCR] is the mainstay for diagnosis of MERS-CoV. RT-PCR has. limitations, including a long turnaround time; and lack of common measurements and correlations with Viral Load [VL]. It is recommended to screen for MERS-CoV using RT-PCR of the upstream of envelope gene [upE] followed by confirmation of the presence of one of the following genes; open reading frame 1 A, 1B genes or nucleocapsid [N] gene. Scientists are looking to implement viral sequencing on all negative samples by RT-PCR and they beleive that can be exposed to another level of testing using sequencing of the RNA-dependent RNA polymerase [RdRp] gene or N gene and in this case a positive result is diagnostic. It is also very important to maintain a contineous and random sequencing for MERS-Cov samples to be able to pick early viral mutations. Serological assays still not widely or routinely performed, and a lot of studies looking to implement such method in routine patient's testings.

## Migraine Disorders

### drug therapy

#### **Clinical trial of subcutaneous steroid injection in patients with migraine disorder**

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (1): 9-12

**Keywords:** Steroids-therapeutic uses; Injections, Subcutaneous; Prospective Studies; Headache; Subcutaneous Fat

**Abstract:** Background: Neurologic literature on therapeutic effect of subcutaneous corticosteroids in patients with migrainous chronic daily headache is scarce. The aim of this research is to assess the therapeutic effects of this management in such patients. Methods: Consecutive patients with migrainous chronic daily headache enrolled a prospective before-after therapeutic study during 2010-2013. Methylprednisolone 40 mg was divided into four subcutaneous injection doses. Two injections were administered in the right and left suboccipital area [exactly at retromastoid cervicocranial junction] and the other two injections in the lower medial frontal area [exactly at medial right and left eyebrows]. A daily headache diary was filled out by the patients before and one month after the intervention. The severity of pain was classified based on a pain intensity instrument using numeric rating scale from 0-10 point scale. Paired t-test and Chi-square test were used for statistical analysis. Results: 504 patients [378 females, 126 males] with migrainous chronic daily headache were enrolled in the study. Dramatic, significant, moderate, mild, or no improvements respectively constituted 28.6%, 33.3%, 23.8%, and 14.3% of the post treatment courses. Therapeutic effect of intervention on mean pain scores was significant;  $t=7.38$ ,  $df=20$ ,  $P=0.000$ . Two cases developed subcutaneous fat atrophy in frontal injection site and three cases experienced syncope during injection. Conclusion: Subcutaneous corticosteroids could be used as an adjunct therapy in patients with migrainous chronic daily headache.

## Mitral Valve Stenosis

#### **Percutaneous transmitral commissurotomy [PTMC]; procedural success and immediate results, a tertiary care hospital experience from developing country**

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**Professional Medical Journal-Quarterly [The]** 2016; 23 (1): 104-113

**Keywords:** Tertiary Care Centers; Developing Countries; Cross-Sectional Studies

**Abstract:** Background: Mitral stenosis is one of the grave consequences of rheumatic heart disease. Balloon valvuloplasty for stenosed mitral and pulmonary valves has been practiced with good results in the world. Since Inoue et al. introduced balloon valvuloplasty in 1982, percutaneous transmitral commissurotomy [PTMC] has become the treatment of choice for mitral stenosis replacing surgical commissurotomy and mitral valve replacement in many cases. Objective: The aim of this study was to audit the procedural success, in hospital outcome in patients undergoing percutaneous trans-mitral balloon commissurotomy [PTMC] in our set up. Study Design: Observational cross sectional study. Place and Duration: The study was conducted at Faisalabad Institute of Cardiology Faisalabad from March 2011 to December 2013. Materials and Methods: Total one hundred and twenty four patients underwent percutaneous transmitral commissurotomy from March 2011 to December 2013. Any patient of age  $\geq 10$  years with mitral stenosis who fulfills the inclusion and exclusion criteria for PTMC was enrolled in this study. A full history particularly, age, sex, occupation, address, symptoms regarding their referral for medical checkup was noted. Detailed clinical examination especially relevant cardiovascular examination of all the patients was done. ECG of every patient was done. Baseline routine investigations including blood complete with ESR, electrolytes, CRP, LFT, RFT was done in each case. A baseline echocardiography was performed in all patients. Mitral valve area was calculated by planimetry and by pressure half time method. Severity of mitral stenosis was graded as: very severe stenosis [valve area  $<1\text{cm}^2$ ], severe [valve area  $1-1.5\text{ cm}^2$ ] moderate [valve area  $1.5-2\text{ cm}^2$ ] and mild [valve area  $>2.0\text{ cm}^2$ ]. To exclude any clot in LA. and LA appendage Transesophageal echocardiography [TEE] was performed. In Cath Lab pre and post PTMC invasive hemodynamics including LA, RA, RV, left ventricular end-diastolic pressure [LVEDP], and transmitral pressure gradient [PG] was calculated. Those patients who have echo contrast on echocardiography were given 5000 IU heparin IV after septal puncture. Antibiotic prophylaxis was initiated in all patients thereafter. The procedure was performed under local anesthesia, if needed moderate sedation was given with midazolam. The procedure was ended when either at least one commissure was splitted, adequate increase in mitral valve area or increase in degree of MR or decrease in mean LA pressure to  $\frac{1}{2}$  of pre PTMC value or decrease in mitral valve gradient was observed. After 24-

48 hours patient was discharged and before discharge transthoracic echo was done to measure all the parameters as pre PTMC along with any echo finding of pericardial effusion. Results: Total 124 patients were studied, 92[74.2%] were female and 32[25.8%] were male showing a female predominance. The mean age was. 27.29 +/- 9.3. Most of the patients 58[46.8%] were in age group 21-30 years. 87[70.16%] patients were in atrial fibrillation and 37[29.83%] had sinus rhythm. The procedure was successful in 118[95.16%] patients. 2[1.6%] patients need urgent MVR due to severe MR and 1 [0.8%] died during procedure. Most of the patients 85[68.55%] were in NYHA class III. After PTMC, ASD was present in 13[10.5%] patients. After PTMC moderate MR was seen in 2[1.6%] and severe MR was observed in 4[2.173%] patients. Most of the patients 115[92.7%] before PTMC were in severe pulmonary hypertension and after PTMC most of the patients 91[73.4%] were in mild pulmonary hypertension. Pre PTMC mean MVA [cm<sup>2</sup>] was 0.684 +/- 0.1226 and post PTMC it was 1.533 +/- 0.281 cm<sup>2</sup>. Mean MVPG pre PTMC was 26.178 +/- 5.94 mmHg and post PTMC it was 7.62 +/- 5.007 mmHg with significant p value 0.0001. Mean LA pressure before procedure was 29.68 +/- 8.137 mmHg and post PTMC it was 12.28 +/- 6.99 and p value was 0.0001. 10 patients had special problems, 3 had previous H/O PTMC, 3 were pregnant lady, one has kyphoscoliosis, one had large IAS aneurysm, one had H/O CVA and one patient was suffering from renal cell carcinoma. Conclusions: The outcome of this study suggests that PTMC is a safe procedure in experienced hand with good success rate and optimal results even in patients with special problems like pregnancy, previous CVA and redo cases.

## Morus

### **Abortifacient effect of mulberry white root in mice**

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**Journal of Gorgan University of Medical Sciences** 2016; 18 (1): 53-57

**Keywords:** Mice; Abortifacient Agents

**Abstract:** Background and Objective: Due to an increase in spontaneous abortions finding a safe and secure method is inevitable. Some medicinal herbs have abortifacient properties. This study was done to determine the effect of abortifacient effect of mulberry white root in mice. Methods: In this experimental study, 50 mice dams were randomly allocated into five groups including control, sham and experimental group 1, 2 and 3. Animals in control group did not receive any substance. Animals in sham group were received normal saline, intraperitoneally. Animals in experimental group 1, 2 and 3 were received doses of 50, 70 and 90 mg/kg/bw of the alcoholic extract of root of mulberry white during the 7th to 12th days of pregnancies, intraperitoneally, respectively. At the 16th day of the pregnancy the uterine tubes of mice were removed and the absorbed fetuses were recorded. Results: The mean of absorb fetuses was 7.4, 7.6, 1.8 and 3.1 in the experimental group 1, 2, 3 and sham, respectively. There was a significant relation between the mean number of aborted fetuses and concentration of strawberry root [P<0.05]. The apparent anomaly in fetus was not recorded. Conclusion: Root of mulberry white has abortifacient effect with dose-dependent manner.

## Motor Activity

### **Descriptive epidemiology of physical activity among Omani adults: the Oman World Health Survey, 2008**

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**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (2): 103-115

**Keywords:** Epidemiology; Health Surveys; Surveys and Questionnaires; World Health Organization

**Abstract:** There is an increasing burden of obesity and obesity-related noncommunicable diseases in Guif Cooperation Council countries, including Oman. This descriptive, epidemiological study assessed physical activity among 2977 Omani adults using a population-based household survey in 2008. Overall, 54.2% of men and 41.6% of women were physically active; the rate was higher in younger cohorts and varied significantly by region of residence. Physical activity related to the transportation [walking and cycling] domain was higher than in the leisure or work domains. Unmarried men aged 30-39 years were twice as likely to be physically active [OR 2.25] and unmarried women aged 40+ years were half as likely to be active [OR 0.58] than their married counterparts. Young women not working were less active [OR 0.18] than working women. Higher education was significantly associated with leisure activity for men aged 30+ years and women aged 40+ years. Further research to understand regional variations and to identify culturally appropriate strategies to promote physical activity is required.

## Multiple Sclerosis

### **Effect of 8 weeks selective training program with instructions focus of internal and external attention on static balance of multiple sclerosis patients**

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**Journal of Gorgan University of Medical Sciences** 2016; 18 (1): 64-68

**Keywords:** Education; Patient Education as Topic; Postural Balance

**Abstract:** Background and Objective: Multiple sclerosis [MS] is the most common progressive neurologic disorder among young adults. This disease leads to lesions regarded to as demyelinating plaques which are scattered in the white matter of CNS hence create various neurological problems. This study was done to evaluate the effect of 8 weeks selective training program with instructions focus of internal and external attention on static balance of MS patients. Methods: In this quasi-experimental study, 23 MS patients were non-randomly divided into, two interventional and one control groups. Training program for two interventional were carried out in 8 weeks, three sessions per week, and each session lasted about one hour. Pre and post test to evaluate the fall risk of subjects using Biodex system was performed in three groups. Results: Static balance was significantly improved in the two interventional compared to control group [P<0.05]. Conclusion: The training program with instructions focus of internal and external attention significantly improves static balance of MS patients.

### **Expanded disability status scale-based disability and dental-periodontal conditions in patients with multiple sclerosis**

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**Medical Principles and Practice** 2016; 25 (1): 49-55

**Keywords:** Disability Evaluation; Dental Plaque Index; Periodontal Index; DMF Index; Oral Health

**Abstract:** Objective: The aim of this study was to evaluate the association between different disability states in patients with multiple sclerosis [MS] as determined by the expanded disability status scale [EDSS] and dental-periodontal measures. Subjects and Methods: Eighty patients with MS [64 females and 16 males] were included in this study. Data on MS types, attack frequency, disease duration, EDSS scores and orofacial complaints prior to an MS attack were obtained from medical records. The plaque index [PI], probing depth [PD], clinical attachment level [CAL], gingival index [GI], decayed-missing-filled teeth [DMFT] index and number of present teeth were measured during one dental examination for each subject. The MS patients were divided into the following 2 groups based on their EDSS scores: low physical disability [L-DS] and high physical disability [H-DS]. Differences in dental parameters between groups of low and high disability were investigated.  $p < 0.05$  was considered statistically significant. Results: The mean age of the participants was  $38.06 \pm 10.11$  years. Age and disease duration were higher in the H-DS MS group than in the L-DS MS group [ $p < 0.05$ ]. The PI, PD and GI were higher and the number of filled teeth was lower in the H-DS MS group than in the L-DS MS group [ $p < 0.05$ ]. The EDSS scores of the H-DS MS group presented a significant correlation with the number of decayed teeth [ $r = -0.548, p = 0.005$ ]. Orofacial complaints prior to an MS attack were reported by 18 [22.5%] patients. Conclusion: Oral measurements revealed various differences between groups of low and high disability in MS patients. In addition, some maxillofacial-oral complaints prior to an MS attack were observed

## physiopathology

### **Comparison of core stabilization, theraband resistance and combined training on functional endurance and postural control in male patients with multiple sclerosis**

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**Journal of Gorgan University of Medical Sciences** 2016; 18 (1): 58-63

**Keywords:** Physical Endurance; Postural Balance

**Abstract:** Background and Objective: Multiple sclerosis [MS] is one of the most common diseases in the central nervous system, caused by damage to myelin sheath. This study was done to compare the effect of eight weeks of core stabilization, theraband resistance and combined training on functional endurance and postural control in male patients with MS. Methods: In this quasi-experimental study, 40 male patients with MS were non-randomly divided into three experimental and one control groups [each group,  $n = 10$ , age range 25 to 35 years, BMI between 20 and 25,

and physical disability scale of 1 to 5.4]. Core stabilization, theraband resistance and combined training, balance berg test and 6-minute walk test were performed in order to exercise protocols. Results: Capacity movement and postural control were significantly improved in experimental groups in comparison with control group [P<0.05]. The most variability was related to the combination of training program. Conclusion: Eight weeks of core stabilization, theraband resistance and combined training improves functional endurance and postural control in men with MS.

## therapy

### **Effect of relaxation on the physical symptoms in women with multiple sclerosis**

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**Journal of Gorgan University of Medical Sciences** 2016; 18 (1): 8-15

**Keywords:** Relaxation; Women; Fatigue; Pain

**Abstract:** Background and Objective: Multiple sclerosis [MS] is a chronic inflammatory autoimmune disease, leading to progressive disability, reduces daily activity and function and emerges with a wide range of physical symptoms. This study was done to determine the effect of relaxation on the physical symptoms in women with Multiple Sclerosis. Methods: In this clinical trial study, 50 patients with MS were randomly divided into relaxation and control groups. In the interventional group, Jacobson and Benson method was performed for 4 weeks, twice a week for 40 minutes and patients in the control group were received only care and routine medical treatment. Data was collected via fatigue severity scale [FSS], numerical rating scale [NRS] before, immediately after and two months after intervention. Results: The mean severity of fatigue score, before, immediately and two months after the intervention were not the same and time trends was effective on severity of fatigue score [P<0.05]. The mean of fatigue score were significantly reduced in intervention group [immediately and two months after intervention] in compared to pre-intervention. The mean severity of pain score, before, immediately and two months after the intervention were not the same and time trends was effective on mean severity of pain score [P<0, 05]. The mean intensity of pain score over time in the relaxation group non-significantly reduced in compared to the control group. Conclusion: Relaxation technique is effective as a low-cost, safe and easy method to reduce fatigue and pain in patients with MS.

## Musculoskeletal Diseases

### epidemiology

### **Prevalence of musculoskeletal disorders in nurses and its relationship with the knowledge of ergonomic and environmental factors**

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**Journal of Gorgan University of Medical Sciences** 2016; 18 (1): 128-132

**Keywords:** Nurses; Knowledge; Surveys and Questionnaires; Human Engineering; Prevalence

**Abstract:** Background and Objective: Musculoskeletal disorder is a professional disease which is due to undesirable work condition and is a disturbing factor of health and welfare in societies. This study was carried out to determine the prevalence of musculoskeletal disorders in nurses and its relationship with the knowledge of ergonomic and environmental factors in north of Iran. Methods: This descriptive-analytic study was carried out on 110 nursing staff in Razi and Imam Khomeini hospitals in north of Iran. Questionnaire of the rate of awareness measurement, general questionnaire of musculoskeletal diseases [Nordik] the questionnaires of the health status and the study relationships between some factors in work place were filled out for each nurse. Results: Prevalence of the pain in neckr back, low back, shoulder, knee, thing pain, arm, leg among nurses was 50%, 49%, 58%, 44.9%, 47.3%, 32.7%, 36.4% and 56.4%, respectively. The condition of work place including air filtration [23.6%], light [22.7%] and air condition [4.5%] was not well. Chair [31%] and work table [34%] for work condition and body position of nurses was unsuitable. There was a significant relationship between low back pain and age and time of working per week of nurses [P<0.05]. Nurses knowledge in the filed ergonomy was 77% and 22.2% of nurses trained in body condition during work. 60% of nurses were not trained for correct patient transportation and relocation. Conclusion: Nurses suffered more from pain in low back, knee, neck and legs. Training of nurses for patient transportation and body position during working in hospital is essential.

## Mustard Gas

### adverse effects

#### **Sulfur mustard exposure and non-ischemic central retinal vein occlusion**

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (1): 59-63

**Keywords:** Retinal Vein Occlusion; Retinal Vein; Blindness; Retina; War Exposure

**Abstract:** A 41-year-old man was referred with a complaint of visual loss in his left eye and his best corrected visual acuity was 20/80. Slit lamp examination showed arborizing conjunctival vessels and dry eye. Fundus examination and fluorescein angiography revealed a non-ischemic central retinal vein occlusion. Cardiovascular, rheumatologic, and hematologic work up showed no abnormal findings. An ascertained history of exposure to sulfur mustard during the Iran-Iraq war was documented in his medical history. Four sessions of intravitreal bevacizumab injections were done as needed. After two-year follow-up, visual acuity in his left eye improved to 20/25 and macular edema was resolved without any need for further interventions. We conclude that sulfur mustard gas exposure may be considered as a predisposing factor for central retinal vein occlusion, as was found in our patient [an Iranian war veteran] by excluding all yet known etiologies and predisposing factors.

## Mycoplasma hominis

### isolation and purification

#### **Comparison of culture and PCR methods for diagnosis of vaginal infection due to Mycoplasma Hominis**

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**Journal of Gorgan University of Medical Sciences** 2016; 18 (1): 108-113

**Keywords:** Vaginal Diseases-diagnosis; Culture; Polymerase Chain Reaction; Mycoplasma Infections

**Abstract:** Background and Objective: Mycoplasma Hominis is the smallest pathogenic bacteria, with no cell wall and free living organisms. It grows slowly and the conventional clinical microbiology techniques can not be applied due to difficulties in cultivation in particular slow growth incubation. This study was done to compare the culture and PCR methods for diagnosis of vaginal infection due to Mycoplasma Hominis. Methods: This laboratory test evaluation study was done on 150 patients with bacterial vaginosis and 50 healthy people with no infection as control, whom referred to Imam Khomeini and Imam Zaman Hospitals in Tehran. Samples were collected in PPLO culture for growth and PBS to perform PCR method. Results: 35.3% and 76% of patients were positive using culture and PCR methods, respectively. Using PCR method 8% of control subjects was positive. There was no significant association between PCR method with abortion, place of residence and also level of educations. There was a significant association between the age [ $P<0.05$ ], times of changing under wear cloths [ $P<0.05$ ] and parity [ $P<0.05$ ]. Conclusion: PCR method is a more reliable technique to detect the vaginal infection due to Mycoplasma Hominis compared to culturing

## Myofascial Pain Syndromes

### therapy

#### **Evaluation of the effects of intravenous and percutaneous low level laser therapy in the management of shoulder myofascial pain syndrome**

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**Journal of Lasers in Medical Sciences** 2016; 7 (1): 16-20

**Keywords:** Laser Therapy; Low-Level Light Therapy

**Abstract:** Introduction: Myofascial pain syndrome [MPS] treatment is challenging with a high recurrence rate and still lacks a clear treatment frame. Therefore research on new, more efficient and long lasting effect treatment modalities is necessary. This study looked at the effects of intravenous laser therapy [IVL] and percutaneous low level laser [PLLL] in the management of shoulder MPS. Methods: In this randomized controlled trial, 30 patients fulfilling inclusion criteria were randomly equally allocated to 3 groups, control, IVL and PLLL. Control group received 12 sessions of placebo low level laser, IVL group received 12 sessions of IVL therapy, and PLLL group received 12 sessions of PLLL therapy. All patients were trained for better body posture, body mechanics, gentle massage of trigger points, stretching exercises of affected muscle [trapezius], and received 10 mg of oral nortriptyline regimen every night for 3 months. Outcomes included pain severity, functional disability, and quality of life. Patients were assessed using Numeric Rating Scale [NRS], Pain Disability Index [PDI], and Short Form Health Survey [SF-12]. Data collected were analyzed using analysis of variance [ANOVA], Mann-Whitney and t tests. Results: The mean of PDI and maximum pain intensity during day and night significantly reduced in both PLLL and IVL groups compared to control group. Although pain severity and PDI reduction was more pronounced in IVL group compared to PLLL group, the differences were not statistically significant. Also, quality of life statistically significantly improved in both IVL and PLLL groups compared to control group was more, and although higher in IVL group, the difference was not statistically significant when compared to PLLL group. No side effects were observed in the intervention groups. Conclusion: Intravenous laser and PLLL therapy had a positive effect on pain severity and PDI reduction, and quality of life in this study. Also no adverse event was recorded. Thus, intravenous lasers and PLLL therapy seem to be effective complementary modalities in managing patients with shoulder MPS.

### **Low level laser therapy versus pharmacotherapy in improving myofascial pain disorder syndrome**

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**Journal of Lasers in Medical Sciences** 2016; 7 (1): 45-50

**Keywords:** Drug Therapy; Temporomandibular Joint Disorders; Naproxen; Low-Level Light Therapy

**Abstract:** Introduction: Temporomandibular disorders [TMD] lead to masticatory muscle pain, jaw movement disability and limitation in mouth opening. Pain is the chief complaint in 90% of the TMD patients which leads to disability and severe socioeconomic costs. The purpose of this study was to evaluate the therapeutic effects of low level laser therapy [LLLT] compared to pharmacotherapy with NSAIDs [naproxen] in myofascial pain disorder syndrome [MPDS]. Methods: In this randomized controlled clinical trial, 40 MPDS patients were divided into two groups. One group received naproxen 500 mg bid for 3 weeks as treatment modality and also had placebo laser sessions. The other group received active laser [diode 810 nm CW] as treatment and placebo drug. Pain intensity was measured by visual analogue scale [VAS] and maximum painless mouth opening was also measured as a functional index every session and at 2 months follow up. Data was collected and analyzed with SPSS software. Independent t test was used to analyze the data. A  $P < 0.05$  was considered significant. Results: Low level laser caused significant reduction in pain intensity [ $P < 0.05$ ] and a significant increase in mouth opening. In naproxen group neither pain intensity nor maximum mouth opening had significant improvement. Pain relief, in subjective VAS was observed in third session in LLLT group, but did not occur in naproxen group. Maximum mouth opening increased significantly in laser group compared to the naproxen group from the eighth session. Conclusion: Treatment with LLLT caused a significant improvement in mouth opening and pain intensity in patients with MPDS. Similar improvement was not observed in naproxen group.

## National Health Programs

### **Compiling comprehensive national health statistics in a fragmented health information system: lessons learned from Lebanon**

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**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (1): 53-58

**Keywords:** Statistics; Health Information Systems; Health Policy

**Abstract:** In view of the rapid health transition faced by the country and a highly dominant private sector, the issue of obtaining reliable health statistics is becoming a priority for Lebanon. This paper reviews the process of compiling and disseminating national health statistics from the multitude of public, private and nongovernmental partners in the country. The lessons learned from preparing two editions of the National health statistics report in Lebanon allow identification of some challenges and strengths of the current health information system in Lebanon. The experience



emphasizes the need for a close partnership with all stakeholders, an efficient management system, adequate human resources and predefined systems and procedures. The process would benefit from having an interactive website for exchange of data and information among stakeholders and the public. The existence of clear guidelines with consistent definitions and standardized forms would also facilitate the collection and analysis of data.

## Nephrostomy, Percutaneous

### **Complications of percutaneous nephrolithotomy single center experience of 103 cases**

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 270-274

**Keywords:** Prospective Studies; Cohort Studies; Kidney Calculi

**Abstract:** Objective: To present our complications of percutaneous nephrolithotomy [PCNL] during initial one year using modified Calvien system. Study Design: Observational prospective cohort. Place and Duration of Study: Armed Forces Institute of Urology [AFIU] Rawalpindi from 1[st] January 2014 to 31[st] December 2014. Material and Methods: The study was conducted at AFIU, Rawalpindi from 1[st] January 2014 to 31[st] August 2014. All of the consecutive 103 patients who underwent PCNL were included. Single-stage PCNL was performed in all the cases under general anesthesia. Pneumatic and ultrasound probes [alone or in combination] were used to fragment the calculi. Stone fragments were removed using graspers. A 16 Fr Foley catheter was used as nephrostomy tube. It was clamped on the first postoperative day. Foley catheter and ureteric stent was removed one day later. Intravenous antibiotics were given during admission period, i.e. 3-5 days. The complications were classified according to modified Clavien system. The data was analysed using the Statistical Package for the Social Sciences [SPSS] version 16. Results: Sixty nine [67%] patients were males and thirty four [33%] were females. Their ages ranged from 7 years to 81 years with mean age 41.7 +/- 16.34 years. PCNL was performed on right side in 48 [46.6%] cases while 55 [53.4%] underwent PCNL on left side. Overall complication rate was 21.35%. Grade 1 complications in 7.7%, grade 2 in 7.8%, grade 3a in 2.8% and grade 4a complications in 2.9% were seen. Conclusion: PCNL is associated with low incidence of major complications even in the hands of beginners when carefully performed.

## Neuralgia

### therapy

### **Pain relief in neuropathic pain-a comparison between 0.5% bupivacaine and 0.5% bupivacaine streptomycin combination**

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 244-249

**Keywords:** Pain; Trigeminal Neuralgia; Neuralgia, Postherpetic; Bupivacaine-therapeutic uses; Streptomycin-therapeutic uses; Drug Therapy, Combination; Treatment Outcome

**Abstract:** Objective: To compare the effectiveness of a combination of streptomycin and bupivacaine for the management of neuropathic pain against bupivacaine alone. Study Design: A randomized controlled double blinded trial. Place and Duration of Study: Pain clinic Combined Military Hospital [CMH] Rawalpindi, CMH Nowshera, Dermatology Dept. Military Hospital [MH] Rawalpindi, Department of Medicine, Surgery CMH Nowshera Feb 2009 to Feb 2010. Material and Methods: Fifty patients with post herpetic neuralgia [PHN], 10 patients with trigeminal neuralgia and 20 patients with nerve entrapment pain were included in the study. For each type of neuropathic pain, the patients were randomly divided into two groups. Group [B] received nerve blocks using 0.5% bupivacaine and group [BS] received nerve blocks using 0.5% bupivacaine and streptomycin lgm combination. A series of four nerve blocks on alternate days were given. VAS [Visual Analogue Scale] was recorded at four, eight and twelve weeks after the last nerve block. Mean baseline VAS and at 12 weeks post treatment in groups B and BS were compared for pain relief and the mean VAS at 12 week post treatment in both the groups was compared for the difference in pain relief between the two groups. Students't test was used for statistical analysis utilizing SPSS 10 versions. Results: Post herpetic neuralgia - group [B]: at 12 weeks, mean VAS was 5.75 in gp [B] and 2.26 in gp [BS] respectively. Nerve entrapment pain- group [B] at 12 weeks, mean VAS was 6.62 whereas in group [BS] VAS was 1.33. Trigeminal

neuralgia-group [B] At 12 weeks mean VAS was 7.0. gp [BS] mean VAS was 1. Pain relief achieved was excellent. Conclusion: Streptomycin and bupivacaine combination is an effective modality to manage neuropathic pain. The pain relief achieved by streptomycin-bupivacaine combination is superior to that achieved with bupivacaine alone.

## Neuralgia, Postherpetic

### **Post-heretic neuralgia; intra-lesional triamcinolone in the treatment**

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**Professional Medical Journal-Quarterly [The]** 2016; 23 (1): 56-59

**Keywords:** Triamcinolone-therapeutic uses; Lidocaine-therapeutic uses; Pain; Prospective Studies; Injections, Intralesional

**Abstract:** Objectives: To assess the efficacy of intra-lesional triamcinolone in for the treatment of Post Herpetic Neuralgia. Study Design: Prospective interventional study. Setting: Dermatology Department of Dow University Hospital. Period: July 2014 to June 2015. Patients and Methods: Twenty nine patients with diagnosis of Post Herpetic Neuralgia were included after taking written and informed consent. An insulin syringe was used for the injections and the medicines were injected intralesionally. The mixture contained 30/70% of triamcinolone to xylocaine ratio for local infiltration in post herpetic scars. Pain relief assessment was done with the help of visual analogue scale [VAS] after two months. Mean pain score before therapy and after therapy was compared with one sample student t test. Results: Out of total 29 patients 14 were male and 15 were females. The mean age +/- SD was found to be 45.9 +/- 15.4 years. The most common region involved was Chest. The mean +/- SD duration of Symptoms was 5.58 +/- 1.80 weeks. The mean pain score before therapy was 6.86 +/- 1.66 which after one month of therapy reduced to 3.72 +/- 1.86. The reduction in pain was statistically significant [p<0.001]. Conclusion: Post Herpetic Neuralgia can be effectively treated by the local infiltration of a mixture of triamcinolone and lignocaine. It is recommended that long-term follow-up studies should be done with corticosteroids only or in combination with local anesthetics to additionally evaluate the effectiveness of such treatment in postherpetic neuralgia.

## Neurilemmoma

### **diagnosis**

### **Nasopalpebral schwannomas and human immunodeficiency virus infection**

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**Medical Principles and Practice** 2016; 25 (1): 96-98

**Keywords:** Nose; Eyelids; HIV; HIV Infections; Sarcoma, Kaposi; Magnetic Resonance Imaging

**Abstract:** Objective: To report a case of a schwannoma of nasopalpebral location, occurring in a human immunodeficiency virus [HIV]-positive patient. Clinical Presentation and Intervention: A 55-year-old man presented with a nasopalpebral painless tumefaction, pneumopathy and HIV-related immunodepression after stopping combination antiretroviral therapy. Magnetic resonance imaging showed subcutaneous masses, with contrast enhancement of the left nose pyramid, internal cantus and inferior palpebral area, suspicious of Kaposi sarcoma. The resected specimen showed schwannoma histology, with tumor cells expressing S100 protein and WT1. Conclusion: The features of a rare case of facial schwannoma of nasopalpebral location in an HIV-positive patient are reported. The diagnosis may be difficult before microscopic examination, with imaging features suggesting a Kaposi sarcoma.

## Nocardia Infections

### diagnosis

#### **Nocardia abscessus-related intracranial aneurysm of the internal carotid artery with associated brain abscess: a case report and review of the literature**

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**Journal of Infection and Public Health** 2016; 9 (3): 358-361

**Keywords:** Nocardia; Intracranial Aneurysm; Carotid Artery, Internal; Brain Abscess

**Abstract:** Nocardia infections primarily begin in the lungs and spread hematogenously to other sites in the body. Thus, a Nocardia brain abscess is not a completely uncommon occurrence. However, a Nocardia brain abscess complicated by a middle cerebral artery and infectious intracranial aneurysm is a very rare clinical entity. We present a case of an infectious intracranial aneurysm with an associated Nocardia brain abscess that required surgical intervention and resection. The patient was an immunocompetent, 60-year-old male who presented with a chief complaint of headache and was found to have an infected intracranial aneurysm and cerebral abscess. He underwent drainage of the abscess with subsequent resection of the infected aneurysm. Cultures from both the blood vessel and brain tissue grew Nocardia abscessus. He was successfully treated with 6 weeks of ceftriaxone and high-dose trimethoprim sulfamethoxazole. Infectious intracranial aneurysms of the brain caused by Nocardia are rare occurrences, and only a single previous case has been described in the literature. The outcomes of this condition can be catastrophic if it is not treated with a combination of surgery and intravenous antibiotics. The guidelines for the management of this infection are not well defined at this time.

## Non-alcoholic Fatty Liver Disease

### epidemiology

#### **Non-Alcoholic Fatty Liver Disease [NAFLD]; frequency in diabetes mellitus [type II] patients and non diabetic group at Shalamar medical and dental college, Lahore**

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**Professional Medical Journal-Quarterly [The]** 2016; 23 (1): 29-33

**Keywords:** Cross-Sectional Studies; Diabetes Mellitus, Type 2; Incidence; Triglycerides-blood

**Abstract:** Objectives: To assess the incidence of NAFLD and biochemical profile in nondiabetic and diabetic patients. Study Design: It was a cross sectional descriptive study. Setting: Shalamar Institute of Health Sciences [SIHS], Lahore. Period: Six months, Jan 2015 to Jun 2015. Methods: The patients coming to the Radiology Department for abdominal ultrasound were age and sex matched into fatty liver and non-fatty liver groups and diabetic and nondiabetic groups and were further evaluated on the basis of glucose, alanine aminotransferase [ALT] and triglycerides [TG] levels from the laboratory data. Results: The findings of all biochemical parameters were raised in diabetic patients with fatty liver as well as in non-fatty liver diabetic group and the differences were found to be statistically [P value less than 0.05] significant. In non-diabetic group, out of 200 subjects 56.5% had NAFLD whereas 43.5% had no NAFLD. In diabetic patients, out of 200 patients 69% had NAFLD and 31% had no NAFLD and the difference was significant statistically [P=<0.05]. The prevalence of NAFLD 12.5% was higher in type-2 diabetic patients as compared to non-diabetic group. In non-diabetic group, 113 subjects had TG value of 181 +/- 82.49, while 87 subjects had TG of 141 +/- 44.5. In diabetic patients, 138 patients had TG value of 467 +/- 277.64 whereas 62 patients had TG value of 178 +/- 46.52, which was statistically significant [P=<0.05]. Conclusion: Fatty liver is an important marker for metabolic syndrome which is a pre-diabetic condition. The occurrence of NAFLD was elevated in type II patients of diabetes. The traditional risk factors for NAFLD are considered to be female sex, type II diabetes mellitus, obesity and hypertriglyceridemia. Hyperglycemia, hypertriglyceridemia and elevated ALT were observed more repeatedly in fatty liver than in non-fatty liver [type II] diabetic patients.

## Nursing Care

### Gap analysis between perceptions and expectations of medical-surgical patients in a public hospital in Saudi Arabia

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**Medical Principles and Practice** 2016; 25 (1): 79-84

**Keywords:** Patient Satisfaction; Perception; Quality of Health Care; Hospitals, Public; Cross-Sectional Studies; Nursing Care

**Abstract:** Objectives: To investigate patients' satisfaction with nursing care by measuring the gap between patients' expectations of care and perceptions of the actual care provided and to identify the areas of nursing care that need improvement. Subjects and Methods: A cross-sectional survey was conducted among patients who were admitted to the Departments of Medicine and Surgery at King Saud Medical City, Riyadh, Saudi Arabia. A modified Service Quality [SERVQUAL] instrument was adapted to collect information from a convenience sample of 432 patients from November 25, 2012, to February 3, 2013. The instrument comprised 22 pairs of questions assessing 5 dimensions of the nursing care provided to patients during hospitalizations. The mean patient expectations and perceptions as well as the gap score values for each dimension of nursing service were tested for differences between the mean scores of the sample at a level of significance of 0.05 using a t test. Results: The gap score for all of the 5 dimensions of nursing services were: responsiveness, -1.71; reliability, -1.48; tangibles, -1.36; assurance, -1.26, and empathy, -0.96. Service quality across the dimensions of responsiveness and reliability was statistically significant [ $p < 0.05$ ]. This result indicated that patients were not satisfied with the nursing service quality in relation to all dimensions. Conclusion: Our study showed negative gaps for the 5 nursing service quality dimensions evaluated. This could provide nurses with information about the aspects of nursing care that promote more positive patient outcomes and satisfaction.

## Nutrition Assessment

### Nutritional assessment in critically ill patients

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (3): 171-179

**Keywords:** Critical Illness; Intensive Care Units; Anthropometry; Nutritional Status; Malnutrition

**Abstract:** Background: Malnutrition is an important factor in the survival of critically ill patients. The purpose of the present study was to assess the nutritional status of patients in the intensive care unit [ICU] on the days of admission and discharge via a detailed nutritional assessment. Methods: Totally, 125 patients were followed up from admission to discharge at SICUs in Shiraz, Iran. The patients' nutritional status was assessed using subjective global assessment [SGA], anthropometric measurements, biochemical indices, and body composition indicators. Diet prescription and intake was also evaluated. Results: Malnutrition prevalence significantly increased on the day of discharge [58.62%] compared to the day of admission [28.8%] according to SGA [ $P < 0.001$ ]. The patients' weight, mid-upper-arm circumference, mid-arm muscle circumference, triceps skinfold thickness, and calf circumference decreased significantly as well [ $P < 0.001$ ]. Lean mass weight and body cell mass also decreased significantly [ $P < 0.001$ ]. Biochemical indices showed no notable changes except for magnesium, which decreased significantly [ $P = 0.013$ ]. A negative significant correlation was observed between malnutrition on discharge day and anthropometric measurements. Positive and significant correlations were observed between the number of days without enteral feeding, days delayed from ICU admission to the commencement of enteral feeding, and the length of ICU stay and malnutrition on discharge day. Energy and protein intakes were significantly less than the prescribed diet [26.26% and 26.48%, respectively]. Conclusion: Malnutrition on discharge day increased in the patients in the ICU according to SGA. Anthropometric measurements were better predictors of the nutritional outcome of our critically ill patients than were biochemical tests.

## Obesity

### **Obesity as a noticeable cause of physical stress; a study on relationship of physical exertion and cardiovascular parameters**

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**IJEHSR-International Journal of Endorsing Health Science Research** 2016; 4 (1): 39-44

**Keywords:** Body Mass Index; Stress, Physiological; Cardiovascular Diseases; Exercise; Physical Exertion; Body Weight

**Abstract:** Introduction Physical tension is a response to environmental pressures, needs or demands or any vigorous bodily activity leading in altering physiological responses, is counted as physical stress such as aerobics, work outs, injury or aches. It may also count on physical traumas as cuts, burns, sprains, broken bones, surgery etc. in other words physical stress is bodily response to substantial pressures such as exertion, noise, illness or exercises. Methodology The purpose of this study is to observe the severity of physical stress in individuals with respect to their BMI, subjects were assessed pre and post for blood pressure and pulse while Physical stress scores were calculated through Sadaf stress scale [SSS], the data was then analyzed using SPSS 19.0. Results showed that physical stress increases with increased BMI while it also shows significant difference in obese individuals presystolic and pre diastolic with post systolic and post diastolic pressures. Conclusion From this study we conclude that BMI is directly proportional to physical stress. So maintenance of normal body weight is the utmost requirement for healthier life.

## Octamer Transcription Factor-3

### **Differential expression of OCT4 pseudogenes in pluripotent and tumor cell lines**

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**Cell Journal [Yakhteh]** 2016; 18 (1): 28-36

**Keywords:** Pseudogenes; Cell Line, Tumor; Pluripotent Stem Cells; MicroRNAs

**Abstract:** Objective: The human OCT4 gene, the most important pluripotency marker, can generate at least three different transcripts [OCT4A, OCT4B, and OCT4B1] by alternative splicing. OCT4A is the main isoform responsible for the stemness property of embryonic stem [ES] cells. There also exist eight processed OCT4 pseudogenes in the human genome with high homology to the OCT4A, some of which are transcribed in various cancers. Recent conflicting reports on OCT4 expression in tumor cells and tissues emphasize the need to discriminate the expression of OCT4A from other variants as well as OCT4 pseudogenes. Materials and Methods: In this experimental study, DNA sequencing confirmed the authenticity of transcripts of OCT4 pseudogenes and their expression patterns were investigated in a panel of different human cell lines by reverse transcription-polymerase chain reaction [RT-PCR]. Results: Differential expression of OCT4 pseudogenes in various human cancer and pluripotent cell lines was observed. Moreover, the expression pattern of OCT4-pseudogene 3 [OCT4-pg3] followed that of OCT4A during neural differentiation of the pluripotent cell line of NTERA-2 [NT2]. Although OCT4-pg3 was highly expressed in undifferentiated NT2 cells, its expression was rapidly down-regulated upon induction of neural differentiation. Analysis of protein expression of OCT4A, OCT4-pg1, OCT4-pg3, and OCT4-pg4 by Western blotting indicated that OCT4 pseudogenes cannot produce stable proteins. Consistent with a newly proposed competitive role of pseudogene microRNA docking sites, we detected miR-145 binding sites on all transcripts of OCT4 and OCT4 pseudogenes. Conclusion: Our study suggests a potential, coding-independent function for OCT4 pseudogenes during differentiation or tumorigenesis.

## Operating Rooms

### **Operating room [or] utilization and efficiency; a study to find out methods for improvement**

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King Khalid Hospital

**Professional Medical Journal-Quarterly [The]** 2016; 23 (1): 6-9

**Keywords:** Quality Improvement; Efficiency

**Abstract:** Introduction: Operating room [OR] is a key department in any institution and it runs with heavy resources. Improper running carries not only loss of revenue but it also effects patient care. Delays in operating room are deleterious and methods to decrease these delays are important not only for patient care, but to maximize operating room resource utilization. Objective: To determine the causes effecting the OR utilization and efficiency and to find out ways to overcome it. Study Design: Observational Study. Period: 15-01-2011 to 08-06-2011. Setting: King Khalid Hospital, KSA. Patients and Methods: Operating room baseline data was collected for one month and it was compared with historical data of the last six month. Operating room utilization was found to be 41% overall and 34% for elective cases [benchmark 85%]. . In patient pathway, on average 17 min were required from call to ward to enter in operating room. First incision time was 11%=8-8:30, 31% = 8:30-9 and 58%= 9+. Cancellation was 9%. Various improvement projects were started including surgical list management, OR rescheduling, start on time dashboard, pre-anesthesia clinic and reinforcement of day surgery program. Results: The results showed 47% improvement in elective OR utilization and OR utilization reaching 69%. There was 76% improvement in emergency case booking and 18% improvement in pre/ post-op process time. There was 64% improvement in 1[st] cases before 9 am. Conclusion: Integrated management working can improve the working and outcome of the operating room resulting in high efficiency and best patient satisfaction.

## Organophosphate Poisoning

### Comparative toxicological study between exposed and non-exposed farmers to organophosphorus pesticides

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**Cell Journal [Yakhteh]** 2016; 18 (1): 89-96

**Keywords:** Pesticides; Toxic Actions; DNA Damage; Farmers; Cross-Sectional Studies; Acetylcholinesterase; Interleukin-6; Surveys and Questionnaires

**Abstract:** Objective: The purpose of this work was to compare DNA damage, acetylcholinesterase [AChE] activity, inflammatory markers and clinical symptoms in farmers exposed to organophosphorus pesticides to individuals that had no pesticide exposure. Materials and Methods: We conducted a cross-sectional survey with a total of 134 people. The subject group consisted of 67 farmers who were exposed to organophosphorus pesticides. The control group consisted of 67 people without any contact with pesticides matched with the subject group in terms of age, gender, and didactics. Oxidative DNA damage, the activities of AChE, interleukin-6 [IL6], IL10 and C-reactive protein [CRP] in serum were measured and clinical examinations conducted in order to register all clinical signs. Results: Compared with the control group, substantial gains were observed in the farmers' levels of oxidative DNA damage, IL10 and CRP. There was significantly less AChE activity in farmers exposed to organophosphorus pesticides. The levels of IL6 in both groups did not significantly differ. Conclusion: The outcomes show that exposure to organophosphorus pesticides may cause DNA oxidative damage, inhibit AChE activity and increase the serum levels of in-inflammatory markers. Using biological materials instead of chemical pesticides and encouraging the use of safety equipment by farmers are some solutions to the adverse effects of exposure to organophosphorous pesticides.

## Orthomyxoviridae

### The environmental deposition of influenza virus from patients infected with influenza A [H1N1] pdm09: Implications for infection prevention and control

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**Journal of Infection and Public Health** 2016; 9 (3): 278-288

**Keywords:** Influenzavirus A; Influenza, Human-prevention and control; Prospective Studies; Cohort Studies; Surveys and Questionnaires; Influenza A Virus, H1N1 Subtype

**Abstract:** In a multi-center, prospective, observational study over two influenza seasons, we sought to quantify and correlate the amount of virus recovered from the nares of infected subjects with that recovered from their immediate environment in community and hospital settings. We recorded the symptoms of adults and children with A [H1N1] pdm09 infection, took nasal swabs, and sampled touched surfaces and room air. Forty-two infected subjects were followed up. The mean duration of virus shedding was 6.2 days by PCR [Polymerase Chain Reaction] and 4.2 days by

culture. Surface swabs were collected from 39 settings; 16 [41%] subject locations were contaminated with virus. Overall, 33 of the 671 [4.9%] surface swabs were PCR positive for influenza, of which two [0.3%] yielded viable virus. On illness Day 3, subjects yielding positive surface samples had significantly higher nasal viral loads [geometric mean ratio 25.7; 95% CI 1.75, 376.0,  $p = 0.021$ ] and a positive correlation [ $r = 0.47$ ,  $p = 0.006$ ] was observed between subject nasal viral loads and viral loads recovered from the surfaces around them. Room air was sampled in the vicinity of 12 subjects, and PCR positive samples were obtained for five [42%] samples. Influenza virus shed by infected subjects did not detectably contaminate the vast majority of surfaces sampled. We question the relative importance of the indirect contact transmission of influenza via surfaces, though our data support the existence of super-spreaders via this route. The air sampling results add to the accumulating evidence that supports the potential for droplet nuclei [aerosol] transmission of influenza.

## Osteoarthritis, Knee

### **Knee osteoarthritis in type 2 diabetes mellitus: does insulin therapy retard osteophyte formation?**

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**Medical Principles and Practice** 2016; 25 (1): 12-17

**Keywords:** Diabetes Mellitus, Type 2; Insulin; Cross-Sectional Studies; Osteophyte; Logistic Models

**Abstract:** Objective: The aim of this study was to investigate whether or not radiographic changes observed in knee osteoarthritis [OA] in type 2 diabetes mellitus [T2DM] patients on insulin therapy differed from those not on insulin. Material and Methods: A cross-sectional study was performed in 311 subjects: 211 T2DM patients and 100 without diabetes [controls] in Mubarak Hospital, Kuwait. Patients were categorized into 3 groups: T2DM patients not on insulin [G1,  $n = 99$ ], T2DM patients on insulin [G2,  $n = 112$ ] and a nondiabetic control group [G3,  $n = 100$ ]. Plain X-ray of both knees was used to assess the changes of knee OA and graded using the Kellgren-Lawrence scale [0-4] and the Osteoarthritis Research Society International Atlas grading scale [0-3]. A total of 622 knee X-rays were evaluated. SPSS version 21.0 was used for data analysis. Results: A highly significant association [ $p < 0.0001$ ] was observed for joint space narrowing [JSN] as well as for osteophyte formation between the three groups. Comparing G2 and G3, a highly significant association [ $p < 0.0001$ ] was retained for JSN [201 [89.7%] vs. 199 [99.5%]] and for osteophyte formation [26 [11.7%] vs. 72 [36.0%]]. Comparing G1 and G2, significantly less osteophyte formation was noted in G2 patients compared to G1 patients [26 [11.7%] vs. 39 [19.7%],  $p = 0.02$ ]. Multivariate logistic regression analysis showed that the G2 group had less chance of osteophyte formation than either the G1 group or G3 control group [OR = 0.294,  $p = 0.008$  and OR = 0.098,  $p < 0.001$ , respectively]. Conclusion: Our findings show that T2DM patients with OA knees on insulin therapy have less radiographic osteophytes compared to T2DM patients not on insulin.

## Otitis Media, Suppurative

### therapy

### **Comparison between the efficacy of topical ciprofloxacin with neomycin in the management of chronic suppurative otitis media**

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 235-239

**Keywords:** Ciprofloxacin-therapeutic uses; Neomycin-therapeutic uses; Drug Therapy, Combination; Treatment Outcome

**Abstract:** Objective: To compare the efficacy of topical Ciprofloxacin with Neomycin in the management of Chronic Supportive Otitis Media [CSOM]. Study Design: Randomized Clinical Trial [RCT]. Place and Duration of Study: Combined Military Hospital [CMH], Peshawar from Jan 2013 to Dec 2013. Patients and Methods: A total of 186 patients with the diagnosis of chronic suppurative otitis media were included in the study. Patients were randomly allotted to either group I that was treated by topical Ciprofloxacin eardrops [ $n = 93$ ] or to group II, treated by topical Neomycin eardrops [ $n = 93$ ]. Outcomes were measured by disappearance of discharge and congestion at follow-up examination. SPSS 16 was used for data analysis. Chi square test was used for analysis and  $p$ -values less than 0.05

were considered significant. Results: Topical Ciprofloxacin is more effective in earlier control of congestion and discharge of ear in CSOM; [p value = 0.001 and < 0.005 respectively] as compared to Neomycin. Conclusion: Topical Ciprofloxacin is a better drug for the treatment of CSOM as compared to topical Neomycin.

## Otolaryngology

### **The validity and reliability of script concordance test in otolaryngology residency training**

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**Journal of Advances in Medical Education and Professionalism** 2016; 4 (2): 93-96

**Keywords:** Reproducibility of Results; Surveys and Questionnaires; Internship and Residency; Education, Medical

**Abstract:** Introduction: The script concordance test [SCT] is one the best tools used to evaluate clinical reasoning in ill-defined clinical situations. The aim of this study was to demonstrate SCT application in otolaryngology residency training. Methods: A 20 item otolaryngology SCT containing 60 questions was administered to 26 otolaryngology residents. The test was prepared by two otolaryngologists familiar to medical education. These questions have been validated by otolaryngology experts. The panel consisted of 9 academic staff in the field of otolaryngology. Pearson correlation test was used to assess the reliability of the test. Results: The obtained mean scores were 68.4 +/- 5.8 [out of 100] for residents and 78.2 +/- 6.4 [out of 100] for experts. There was a significant difference between the two scores [p<0.005]. Cronbach's alpha value was 0.80. Conclusion: The SCT is a reliable tool to evaluate clinical reasoning in otolaryngology residents. It should be included in otolaryngology residency training.

## Outliers, DRG

### **Investigation of outliers of evaluation scores among school of health instructors using outlier - determination indices**

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**Journal of Advances in Medical Education and Professionalism** 2016; 4 (1): 21-25

**Keywords:** Students; Schools, Medical; Cross-Sectional Studies; Education; Teaching-standards

**Abstract:** Introduction: Teacher evaluation, as an important strategy for improving the quality of education, has been considered by universities and leads to a better understanding of the strengths and weaknesses of education. Analysis of instructors' scores is one of the main fields of educational research. Since outliers affect analysis and interpretation of information processes both structurally and conceptually, understanding the methods of detecting outliers in collected data can be helpful for scholars, data analysts, and researchers. The present study aimed to present and compare the available techniques for detecting outliers. Methods: In this cross-sectional study, the statistical population included the evaluation forms of instructors completed by the students of Shiraz School of Health in the first and second semesters of the academic year 2012-2013. All the forms related to these years [N=1317] were entered into analysis through census. Then, four methods [Dixon, Gauss, Grubb, and Graphical methods] were used for determining outliers. Kappa coefficient was also used to determine the agreement among the methods. Results: In this study 1317 forms were completed by 203 undergraduate and 1114 postgraduate students. The mean scores given by undergraduates and postgraduates were 17, 24 +/- 3, 04 and 18.91 +/- 1.82, respectively. The results showed that Dixon and Grubb were the most appropriate methods to determine the outliers of evaluation scores in small samples, because they had appropriate agreement. On the other hand, NPP and QQ plot were the most appropriate methods in large samples. Conclusion: The results showed that each of the studied methods could help us, in some way, determine outliers. Researchers and analysts who intend to select and use the methods must first review the observations with the help of descriptive information and overview of the distribution. Determination of outliers is important in evaluation of instructors, because by determining the outliers and removing the data that might have been recorded incorrectly, more accurate and reliable results can be obtained.



## Ovarian Neoplasms

### genetics

#### **Association of C/T polymorphism in 3'UTR of E-cadherin gene with ovarian cancer risk**

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**Journal of Gorgan University of Medical Sciences** 2016; 18 (1): 94-100

**Keywords:** Polymorphism, Genetic; Cadherins; Risk; Case-Control Studies

**Abstract:** Background and Objective: Ovarian cancer is the second most common gynecological malignancy. One of the most important genes in Wnt signaling pathway is E-cadherin [CDH1], which is involved in epithelial cell-cell interaction and plays an important role in the establishment and maintenance of intercellular adhesion, cell polarity and tissue architecture. E-cadherin codes a group of connector proteins which caused to intercellular adhesion. It has an important role in adhesion of blastomere and ability to bind fetal tissues. Nucleotide change in the coding region of this gene may lead to develop ovarian cancer. This study was conducted to evaluate the association of +54C/T [Rs 1801026] 3 UTR of E-cadherin gene polymorphism with ovarian cancer risk. Methods: This case-control study was done on 100 tissue samples of patients with ovarian cancer as cases and 100 age-matched healthy women as control in Imam Khomeini Hospital, Tehran, Iran. The E-cadherin gene polymorphism was determined by using the PCR-RFLP method. Results: There was no association between CT [95% CI: 0.81-4.31; OR=1.87; P<0.14] and TT [95% CI: 0.73-2.38; OR=1.44; P<0.29] genotypes and ovarian cancer. No association was found between genotypes with grade and stage of cancer. Conclusion: There is no correlation between +54C/T [Rs1801026] 3 UTR of E-cadherin gene polymorphism with ovarian cancer.

## Panniculitis, Peritoneal

### diagnosis

#### **Sclerosing mesenteritis presenting as a pseudotumor of the greater omentum**

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**Medical Principles and Practice** 2016; 25 (1): 93-95

**Keywords:** Granuloma, Plasma Cell; Omentum; Liposarcoma; Tomography, X-Ray Computed; Intestine, Small

**Abstract:** Objective: The aim was to demonstrate a diagnostic challenge of sclerosing mesenteritis initially considered as liposarcoma. Clinical Presentation and Intervention: A 45-year-old man was admitted with a painful abdominal mass. Abdominal computed tomography demonstrated a well-demarcated tumor in his left hemiabdomen, with a large fat component and areas of soft tissue attenuation suggestive of liposarcoma. Intraoperative findings showed a tumor arising from the greater omentum. The tumor was completely removed, and histopathology confirmed a pseudotumorous type of sclerosing mesenteritis with dominant mesenteric lipodystrophy. Conclusion: This case showed that a pseudotumorous type of sclerosing mesenteritis should be considered in the differential diagnosis of the mesenterictumors.

## Pelvis

#### **Determining the incidence of gynecoid pelvis using three-dimensional computed tomography in nonpregnant multiparous women**

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**Medical Principles and Practice** 2016; 25 (1):40-48

**Keywords:** Incidence; Tomography, X-Ray Computed; Parity; Cephalopelvic Disproportion; Retrospective Studies; Pelvimetry

**Abstract:** Objectives: To determine the incidence of gynecoid pelvis by using classical criteria and measured parameters obtained from three-dimensional computed tomography [3D CT] pelvimetry in nonpregnant multiparous women who delivered vaginally. Subjects and Methods: Our hospital's picture archiving and communication system was reviewed retrospectively. All adult women who had undergone CT examination with routine abdominal protocols were identified. In the pelvic inlet, midpelvis, and pelvic outlet, classical criteria and measured parameters, both alone and in combination, were used to determine the presence of gynecoid pelvis. Results: 3D CT pelvimetry was performed on 226 women aged 23-65 years without any history of cephalopelvic disproportion and who had at least one delivery of an average fetal size [ $>2, 500$  g]. The median parity was 4, and the mean  $\pm$  [SD] birth weight was 3, 700  $\pm$  498 g. compared to the classical criteria, measured parameters and their combined use with the classical criteria significantly reduced the frequency of gynecoid pelvis [51.3 and 47.8%, respectively, vs. 71.6%;  $p = 0.001$ ]; however, there was no significant difference between the measured parameters and their combined use with classical criteria with regard to the frequencies of gynecoid pelvis [ $p > 0.05$ ]. Conclusions: With the use of measured parameters of 3D CT pelvimetry, the incidence of gynecoid pelvis reduces to a more acceptable level [51.3%] in accordance with obstetric knowledge. Since there is no considerable decrease with the addition of classical criteria, 3D CT pelvimetry alone has merit for determining a woman's pelvic capacity for obstetric needs after the improvement and standardization of measured parameters.

## Pharmacovigilance

### Pharmacovigilance and adverse drug reporting system; awareness in Pakistan: pharmacy students and professionals approach and facts

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**Professional Medical Journal-Quarterly [The]** 2016; 23 (1): 85-92

**Keywords:** Adverse Drug Reaction Reporting Systems; Awareness; Students, Pharmacy; Perception; Surveys and Questionnaires; Cross-Sectional Studies

**Abstract:** This study was conducted to assess the pharmacy students and graduate knowledge and awareness about pharmacovigilance and adverse drug reporting [ADR] system in Karachi, Pakistan. Objectives: This study was designed to identify the trends, perception and approaches of pharmacy students and graduate towards current scenarios of pharmacovigilance and ADR contextual to our setting. Study Design: It was cross sectional, qualitative study. Setting: Pharmacy final year students and fresh graduates of two public and two private sector universities were included in the study. Period: Data was collected between January to August, 2015. Method: Relevant information was collected using questionnaire with 18 open ended and 7 close ended questions. 400 final year participants and 150 fresh graduates were incorporated in this survey. SPSS 20.0 was used to analyze the results and Percent, frequencies and mean scores were calculated for various outcomes. Results: Response rate of final year students and fresh graduates was found [97%,  $n = 388$ ] and [88%,  $n = 132$ ] respectively. Students level of awareness about pharmacovigilance was found [54%,  $n = 216$ ] in final year students while little higher rates were observed [78%,  $n = 110$ ] in graduates. Concept of pharmacovigilance gained through pharmacy curriculum was calculated 45% rated by final year students. The pharmacovigilance knowledge mean score was found to be 2.368.5 and 2.886.3 for final year students and fresh graduates respectively. 58% total respondents were aware with relationship between the drug and the ADR. Conclusion: The results of this study demonstrate that pharmacy students of final year in public and private sector universities of Pakistan are aware with some basic knowledge of ADRs and pharmacovigilance, but it is a need of time to incorporate more contents of such aspects in curriculum with some practical exposure that how to report ADRs.

## Phoeniceae

### Effect of phoenix dactylifera spathe on seminiferous tubules structure and spermatogenesis in rat

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**Journal of Gorgan University of Medical Sciences** 2016; 18 (1): 39-44

**Keywords:** Seminiferous Tubules; Spermatogenesis; Spermatozoa; Testis; Testosterone; Rats

**Abstract:** Background and Objective: The spathe of phoenix dactylifera contains protein, fatty, fiber, sugar, moisture, furfural, coumarin, organic compounds of camphor family, phytosterols, 1, 2-Di methoxil 1, 4-Di methyl benzene. This

study was done to evaluate the effect of alcoholic extract of phoenix dactylifera spathe on seminiferous tubules and spermatogenesis in adult male rats. Methods: In this experimental study, 50 adult male rats were randomly allocated into five groups including: control, sham and experimental groups 1, 2 and 3. Animals in control group did not receive any treatment. Animals in sham group were received 0.2 ml normal saline intraperitoneally. Animals in experimental group 1, 2 and 3 were received 0.05, 0.1 and 0.2 g/kg/bw of alcoholic extract of phoenix dactylifera spathe intraperitoneally, respectively. After 14 days of study, the testis was removed and the sections of tissue were prepared. Testosterone hormone measured by y-counter method. Results: Serum levels of testosterone and the spermatozoa count were significantly reduced in the experimental groups in compared to control and sham groups [P<0.05]. The count spermatogonia, primary spermatocyte, spermatid, sertoli and leydig cells and seminiferous tubules structures did not reduce in the experimental groups in compared to control and sham groups. Conclusion: Phoenix dactylifera Spathe alcoholic extract at doses of minimum and medium in adult male rats reduces sera level of testosterone and spermatozoa number.

## Photochemotherapy

### **Photodynamic therapy - a non-invasive treatment modality for precancerous lesions**

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**Journal of Lasers in Medical Sciences** 2016; 7 (1): 30-36

**Keywords:** Precancerous Conditions; Leukoplakia-therapy; Aminolevulinic Acid-analogs and derivatives; Mouth Neoplasms

**Abstract:** Introduction: Oral premalignant lesions are conditions having high potential tendency for transformation into malignancy. The use of a conservative and effective treatment modality is one of the best strategies for cancer prevention. Photodynamic therapy [PDT] is a non-invasive method for topical and selective treatment of oral precancerous lesions. The present study was taken up to determine the efficacy of PDT in oral precancerous lesions. Methods: The study consisted 13 patients with 24 oral leukoplakia [OL] lesions and 8 with 20 oral lichen planus [OLP] lesions, divided into control and study groups. These lesions were affecting various intraoral sites, the buccal mucosa being the most common site followed by tongue and gingiva. The treatment regimen of PDT included 98% 5-aminolevulinic acid [5-ALA] which is topical applied and irradiated with light emitting diode [LED] of 420 nm wavelengths at several sessions. Results: In OL 16.6% of cases showed complete response, 66.6% partial response and 16.6% no response of the lesions to the treatment. In OLP 80% and 20% of the lesions showed partial and no response respectively. The differences with control groups for OL + OLP were found to be significant [P<0.001]. Conclusion: Based on the results of the present study, we can conclude that PDT appears to be a feasible alternative to conventional therapy for oral premalignant lesions.

## Physical Endurance

### **Effect of eight weeks of endurance and resistance training on serum adiponectin and Insulin resistance index of inactive elderly men**

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**Journal of Gorgan University of Medical Sciences** 2016; 18 (1): 69-77

**Keywords:** Adiponectin-blood; Insulin Resistance; Aged; Resistance Training

**Abstract:** Background and Objective: Adiponectin is one of the adiposaitocines which secret from adipose tissue and is very effective in the pathogenesis of obesity and its associated disorders, especially in elderly people who are at risk for cardiovascular disease. This study was carried out to evaluate the effect of eight weeks of endurance and resistance training on adiponectin level, insulin resistance index in inactive elderly men. Methods: In this quasi-experimental study, 24 inactive elderly men were non-randomly divided into interventional and control groups. The combined training included endurance training [with intensity of. 60-70% of maximum heart rate reserve] and resistance training [with intensity of 70% one repetition maximum]. The training performed 3 times per week [one hour session] for 8 weeks. Results: The eight weeks of combined training increased the adiponectin level in interventional group compared to the controls [P<0.05]. Insulin and FBS levels, insulin resistance index, and body fat percentage significantly reduced in interventional group compared to the controls [P<0.05]. Conclusion: The eight weeks of combined training increases the adiponectin level and reduces insulin resistance in elderly men.

### **Effect of milk consumption on healthy young men rehydration and endurance performance after dehydration due to intermittent exercise in warm environmental condition**

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**Journal of Gorgan University of Medical Sciences** 2016; 18 (1): 78-85

**Keywords:** Milk; Fluid Therapy; Dehydration; Exercise; Rehydration Solutions

**Abstract:** Background and Objective: Rapid and adequate rehydration is important for many athletes, especially those taking multiple sessions of exercise each day, or those involved in weight category sports. The macronutrient and electrolyte concentration of the fluid ingested following exercise can affect the amount retained within the body can influence hydration status. This study was done to compare the effect of milk consumption on healthy young men rehydration and endurance performance after dehydration due to intermittent exercise in warm environmental condition. Methods: In this quasi-experimental study, the laboratory protocol was carried out by ten young healthy men in three sessions within one week intervals. Participants were on drinking regiment including water, low-fat milk, and powerade. Urine samples were collected pre-exercise, post-exercise, post-drinking and 1, 2 and 3 hours over recovery. Exercise capacity test commenced within 10 min after 3h recovery. This was undertaken in warm environmental condition at a power output corresponding to 70% V<sub>O2</sub> max. Exercise continued until voluntary exhaustion. Heart rate and RPE were recorded at 5 min intervals throughout exercise. Results: Pre-exercise urine specific gravity value was not different between the milk and the, powerade and the water groups. Total urine output was significantly reduced in the milk group in compared to powerade and the water consumption [P<0.05]. At the end of the study, net fluid balance was significantly positive in milk group compared to powerade and water groups [P<0.05]. Time of exhaustion on the exercise capacity test [70% V<sub>O2</sub> max] was significantly more in milk in comparison with powerade group [P<0.05]. Conclusion: Low-fat milk is more effective at rehydrating compared to water and exercise capacity in intermittent activity of heat in healthy young men.

## Physicians, Family

### **The study of urban family physicians performance and its related factors in the south of Iran**

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**Journal of Health Management and Informatics [JHMI]** 2016; 3 (1): 10-14

**Keywords:** Family Practice; Urban Population; Work Performance; Referral and Consultation; Cross-Sectional Studies

**Abstract:** Introduction: The Family Physician Program is one of the most important plans for increasing the equitable access and affordable health services. This study aimed to examine the performance of Urban Family Physicians and associated factors in the third year of its implementation. Method: A cross-sectional study was conducted on all Family Physicians [31 persons] working in the private and public polyclinics and clinics in the Firoozabad, from October to December 2014. The population of the study consisted of all the physicians [31 persons] who were involved in the Family Medicine Program. The main instrument for data gathering was a standard questionnaire developed by Ministry of Health and Medical Education [MOHME]. Validity and reliability of the questionnaire have been confirmed by MOHME. The questionnaire had four parts including medical equipment, informing the patients, referral system rules, and protocols. The data were analyzed using SPSS statistical software, version 16, through appropriate statistical tests including Independent T-test, Pearson Correlation, One sample T-test, in a significance level of <0.05. Results: Findings of the study showed that there was not a significant association between performance of physicians and equipment [77.20 +/- 22.80]. Their performance based on informing patients [81.59 +/- 16.69], protocols [82.42 +/- 12.05], and total performance [82.41 +/- 13.42] was good. Their performance in terms of referral system [69.35 +/- 16.15] was weak. There were not any association between the performance and marital status, age, career, and sex. In contrast, there was a significant relationship between nativity and performance so that the performance of native physicians was better. Conclusion: The Urban Family Physician is an outstanding step for improving the public health but its successful implementing needs to develop an appropriate solution for employing the native physicians. It seems that applying various incentives and employing the native physicians in terms of their ability and training them about the importance of referral systems in public health will be helpful.

## Pneumococcal Infections

### epidemiology

#### **Epidemiology of invasive pneumococcal disease in Saudi Arabian children younger than 5 years of age**

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Ministry of Health

**Journal of Epidemiology and Global Health** 2016; 6 (2): 95-104

**Keywords:** Child; Prospective Studies; Immunologic Deficiency Syndromes; Drug Resistance, Multiple; Streptococcus pneumoniae

**Abstract:** This study evaluated the incidence, serotype distribution, and antimicrobial susceptibility of invasive pneumococcal disease [IPD] in Saudi Arabian children. This multicenter, prospective, clinical surveillance study included children under 5 years of age, residents of one of the seven study health areas, who were brought to a study hospital with suspicion of IPD. Bacterial isolates from sterile site samples, collected less than 24 h after hospital visit/admission, were identified, serotyped, and tested for antibiotic susceptibility. Between June 2007 and January 2009, 631 episodes of suspected IPD were recorded, and 623 were included in the analysis. One child [0.2%] had previously received one dose of a pneumococcal vaccine. Forty-seven episodes were positive for Streptococcus pneumoniae and three for Haemophilus influenzae. The incidence of confirmed IPD cases was estimated to be 2.5-21.6 per 100, 000 children [<5 years]. Among the 46 S. pneumoniae isolates serotyped and tested for antibiotic susceptibility, the most common serotypes were 5 and 23F [20% each], 6B [17%], and 1 and 14 [11% each]. Sixty-three percent of isolates were multidrug-resistant. Vaccination of Saudi Arabian children with expanded-coverage conjugate pneumococcal vaccines containing serotypes 1 and 5 could have a substantial impact to prevent IPD in this population.

## Poliomyelitis

### prevention and control

#### **Polio eradication: an uphill task**

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King Edward Medical University - PMRC TB Research Centre

**PJMR-Pakistan Journal of Medical Research** 2016; 55 (1): 1-2

**Keywords:** Disease Eradication; Poliovirus; Vaccination; Virus Shedding

## Polycystic Ovary Syndrome

#### **Body mass index below obesity threshold implies similar cardiovascular risk among various polycystic ovary syndrome phenotypes**

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**Medical Principles and Practice** 2016; 25 (1): 61-66

**Keywords:** Body Mass Index; Obesity; Cardiovascular System; Phenotype; Risk Factors; Cross-Sectional Studies

**Abstract:** Objective: The aim of this study was to determine the cardiometabolic risk factors in different polycystic ovary syndrome [PCOS] phenotypes. Subjects and Methods: This cross-sectional study was performed between 2010 and 2011. Eighty-nine patients with PCOS and 25 age- and weight-matched healthy controls were included in the study. Patients were grouped using the Rotterdam 2003 criteria as: group 1, oligomenorrhea and/or anovulation [ANOV] and hyperandrogenemia [HA] and/or hyperandrogenism [n = 23]; group 2, ANOV and polycystic ovaries [PCO; n = 22]; group 3, HA and PCO [n = 22]; group 4, ANOV, HA and PCO [n = 22]; group 5, controls [n = 25]. Laboratory blood tests for diagnosis and cardiometabolic risk assessments were performed. Insulin resistance [IR] was calculated

in all patients with the homeostasis model assessment of IR [HOMA-IR] formula. An euglycemic hyperinsulinemic clamp test was performed on 5 randomly selected cases in each subgroup, making 25 cases in total, and indicated as the 'M' value [mg/kg/min], which is the total body glucose disposal rate. Results: The mean BMI values of the groups were: group 1, 26.1 +/- 5.3; group 2, 27.9 +/- 5.2; group 3, 24.3 +/- 4.2; group 4, 27.9 +/- 7.5; group 5, 24.7 +/- 5.2 [p > 0.05]. There were no differences in the lipid profile, plasma glucose, HOMA-IR, insulin and M values between the groups [p > 0.05]. Phenotypes with oligomenorrhea/ovulation [groups 1, 2 and 4] were more obese than group 3 [p = 0.039]. Conclusions: The cardiometabolic risk profile was similar among the PCOS subgroups. This finding could be attributed to the mean BMI values, which, being below 30, were not within the obesity range. Obesity appeared to be an important determinant of high cardiovascular risk in PCOS.

### **Correlation of serum lipoprotein ratios with insulin resistance in infertile women with polycystic ovarian syndrome: a case control study**

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**IJFS-International Journal of Fertility and Sterility** 2016; 10 (1): 29-35

**Keywords:** Lipoproteins-blood; Insulin Resistance; Infertility, Female; Case-Control Studies

**Abstract:** Background: Dyslipidemia and insulin resistance [IR], occurring in most infertile women with polycystic ovarian syndrome [PCOS], increase the risk of cardiovascular disease [CVD] and type 2 diabetes. This study aimed to assess the relationships between lipoprotein ratios and IR in PCOS women. Materials and Methods: Thirty six infertile women with PCOS selected based on Andro-gen Excess Society [AES] criteria and 29 healthy women matched for age were recruited to this case-control study. After physical measurements, fasting serum glucose [Glu], insulin and lipid profile levels [triglycerides [TGs], total cholesterol [TC], low-density lipoprotein-cholesterol [LDL-C] and high-density lipoprotein-cholesterol [HDL-C]] were measured, while lipoprotein ratios [TC/HDL-C, LDL-C/HDL-C, TG/HDL-C] were calculated. IR was also calculated using homeostasis model assessment [HOMA]-IR. The optimal cutoffs of lipoprotein ratios in relation to HOMA-IR were calculated based on the Receiver Operating Characteristics [ROC] curve analysis using the area under curve [AUC]. Results: Waist circumference [WC], insulin levels, HOMA-IR, TG levels, and all lipoprotein ratios were significantly higher, while HDL-C was lower in PCOS group as compared to healthy controls. All lipoprotein ratios, TG levels, and WC are significantly correlated with insulin levels and HOMA-IR. Among lipoprotein ratios, the highest AUC of the ROC belonged to TG/HDL-C ratio with sensitivity of 63.6% and specificity of 84.4% [TG/HDL-C 0.19] as a marker of IR in infertile PCOS women. Conclusion: Lipoprotein ratios, particularly TG/HDL-C, are directly correlated with insulin levels and can be used as a marker of IR [HOMA-IR] in infertile PCOS patients.

### **Metabolic and endocrine characteristics of indian women with poly cystic ovary syndrome**

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**IJFS-International Journal of Fertility and Sterility** 2016; 10 (1): 22-28

**Keywords:** Insulin Resistance; Cross-Sectional Studies; Thyrotropin; Follicle Stimulating Hormone-blood; Luteinizing Hormone-blood; Insulin-blood

**Abstract:** Background: Polycystic ovary syndrome [PCOS] is one of the most common endo-crinological disorders among women of reproductive age and the leading cause of female infertility. This study intends to evaluate the lipid profile, hormonal levels [free T3 [fT3], free T4 [fT4], thyroid stimulating hormone [TSH], insulin, luteinizing hormone [LH], follicle stimulating hormone [FSH], and prolactin] in PCOS women from Nellore and its surrounding districts of Andhra Pradesh, India. Materials and Methods: This cross-sectional study included 80 newly diagnosed PCOS women and an equal number of age and body mass index [BMI] matched healthy controls. We used the photometry methods to determine serum glucose levels and the lipid profile. An immunoturbidometry method was employed to measure high sensitive C-reactive protein [hsCRP]. All hormonal parameters were measured using chemiluminescence immunoassays. Insulin resistance was evaluated using the homeostatic model assessment-insulin resistance [HOMA-IR] method. Statistical analysis was done using SPSS software version 20.0. Results: The PCOS patients presented statistically higher levels of total cholesterol [TC], triglycerides [TG] and low density lipoprotein cholesterol [LDL-c, P<0.0001] when compared to those of controls. PCOS patients had elevated fasting glucose, hsCRP, fasting insulin, TSH, LH and prolactin levels [P0.001]. An increased LH/FSH ratio [>1.5] was seen in women with PCOS compared with control women. In addition, we observed a direct correlation between fasting insulin with fasting glucose and HOMA-IR. LH was inversely proportional to BMI. Conclusion: The present study showed a higher prevalence of insulin resistance, dyslipidemia, and hypothyroidism in PCOS women. Furthermore this study showed increased LH concentrations, a higher LH/FSH ratio, and higher prolactin levels in PCOS women.

**Relationships between serum luteinizing hormone level, endometrial thickness and body mass index in polycystic ovary syndrome patients with and without endometrial hyperplasia**

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**IJFS-International Journal of Fertility and Sterility** 2016; 10 (1): 36-41

**Keywords:** Luteinizing Hormone-blood; Endometrium; Body Mass Index; Body Weight; Endometrial Hyperplasia; Cross-Sectional Studies

**Abstract:** Background: The endometrial hyperplasia measured by ultrasound in poly cystic ovary syndrome [PCOS] women is strongly related to pathologic endometrial thickness, but there is no consensus on the relation between serum luteinizing hormone [LH] and either of these factors: pathologic endometrial hyperplasia and body mass index [BMI]. Materials and Methods: In this observational cross-sectional study, three hundred fifty infertile PCOS women were involved in this research. An endometrial biopsy was taken by using a pipelle instrument, regardless of menstrual cycle's day and all samples were reported by the same pathologist. Basal serum LH level was compared between two subgroups [hyperplasia and non-hyperplasia]. The intended population was divided into three groups according to BMI and basal serum LH, later on the comparison was made in three groups. Chi-square test was applied to compare nominal variables between groups. Mann-Whitney U, and one way ANOVA tests were used to compare means on the basis of the result of normality test. Results: The frequency of endometrial hyperplasia was 2.6%. Endometrial thickness in the patients with endometrial hyperplasia was significantly higher than that of a normal endometrium [10.78 +/- 3.70 vs. 7.90 +/- 2.86 respectively, P=0.020]. There was no relation between endometrial hyperplasia and serum LH [P=0.600]. The ANOVA test showed serum LH levels were not the same among three BMI groups [P=0.007]. Post hoc test was also performed. It showed that the LH level in normal BMI group was significantly higher than those of other groups [P=0.005 and P=0.004], but there was no statistical difference between overweight and obese groups [P=0.8]. We found no relationship between BMI and endometrial thickness in PCOS patients [P=0.6]. Conclusion: Sonographic endometrial stripe thickness is predictive for endometrial hyperplasia in PCOS women. We could not find out any relationship between serum LH level and BMI with endometrial thickness in PCOS patients. However, our study confirmed a diverse relationship between serum LH level and BMI in PCOS patients.

## Preimplantation Diagnosis

**The effect of preimplantation genetic screening on implantation rate in women over 35 years of age**

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**Cell Journal [Yakhteh]** 2016; 18 (1): 13-20

**Keywords:** Embryo Implantation; Maternal Age; Pregnancy; In Situ Hybridization, Fluorescence; Sperm Injections, Intracytoplasmic; Aneuploidy; Women

**Abstract:** Objective: Advanced maternal age [AMA] is an important factor in decreasing success of assisted reproductive technology by having a negative effect on the success rate of intra-cytoplasmic sperm injection [ICSI] particularly by increasing the rate of embryo aneuploidy. It has been suggested that the transfer of euploid embryos increases the implantation and pregnancy rates, and decreases the abortion rate. Preimplantation genetic screening [PGS] is a method for selection of euploid embryos. Past studies, however, have reported different results on the success of pregnancy after PGS in AMA. Investigating the pregnancy rate of ICSI with and without PGS in female partners over 35 years of age referred to infertility centers in Tehran. Materials and Methods: In this randomized controlled trial, 150 couples with the female partner over age of 35 were included. Fifty couples underwent PGS and the remaining were used as the control group. PGS was carried out using fluorescent in situ hybridization [FISH] for chromosomes 13, 18, 21, X and Y. Results of embryo transfer following PGS were evaluated and compared with those in the control group. Results: Implantation rates obtained in the PGS and control groups were 30 and 32% respectively and not significantly different [P>0.05]. Conclusion: PGS for chromosomes 13, 18, 21, X and Y does not increase implantation rate in women over 35 years of age and therefore the regular use of PGS in AMA is not recommended.

## Premature Birth

### prevention and control

#### **To compare the effectiveness of nifedipine and glyceryl trinitrate patch in prevention of preterm Labour**

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**JPMI-Journal of Postgraduate Medical Institute** 2016; 30 (1): 92-96

**Keywords:** Nitroglycerin-pharmacology; Nifedipine-pharmacology; Pregnancy; Pregnant Women; Nitroglycerin-therapeutic uses; Nifedipine-therapeutic uses

**Abstract:** Objective: To assess the effectiveness of Nifedipine and Glyceryl trinitrate patch in prolonging the pregnancy for more than 48 hours. Methodology: This was a randomized control study. Fifty patients with preterm labour meeting the inclusion criteria were inducted in study and randomly allocated to the treatment group A [Nifedipine] and group B [Glyceryl trinitrate patch, GTN]. After taking consent from the patients, all the details were documented on a proforma and tocolysis was started with either of these tocolytics according to a preset protocol. Results: Nifedipine was found to be more effective than GTN, as prolongation of pregnancy beyond 48 hours was more frequent [74%] with nifedipine than GTN [40%] with P value <0.05. Similarly prolongation beyond 7 days was also more frequent [32%] with nifedipine as compared with GTN [24%]. Most common adverse effect found with nifedipine was headache followed by palpitations and hypotension. GTN patch had a better side effect profile with most of the patients being asymptomatic. Fetal distress was noticed more in GTN group as compared with nifedipine. Conclusion: Nifedipine, as a tocolytic, is found to be more effective in pregnancy prolongation when compared with Glyceryl trinitrate but has frequent maternal adverse drug effects. Glyceryl trinitrate patch is well tolerated by the patients with preterm labour with relatively fewer side effects.

## Prenatal Diagnosis

#### **Fetal Rhd genotyping using real-time polymerase chain reaction analysis of cell-free fetal DNA in pregnancy of rhd negative women in south of Iran**

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**IJFS-International Journal of Fertility and Sterility** 2016; 10 (1): 62-70

**Keywords:** Genotype; Prospective Studies; Cohort Studies; Real-Time Polymerase Chain Reaction; Cell-Free System; DNA; Pregnancy; Rh-Hr Blood-Group System; Genotyping Techniques

**Abstract:** Background: Maternal-fetal RhD antigen incompatibility causes approximately 50% of clinically significant alloimmunization cases. The routine use of prophylactic anti-D immunoglobulin has dramatically reduced hemolytic disease of the fetus and newborn. Recently, fetal RHD genotyping in RhD negative pregnant women has been suggested for appropriate use of anti-D immunoglobulin antenatal prophylaxis and decrease unnecessary prenatal interventions. Materials and Methods: In this prospective cohort study, in order to develop a reliable and non-invasive method for fetal RHD genotyping, cell free fetal DNA. [cffDNA] was extracted from maternal plasma. Real-time quantitative polymerase chain reaction [qPCR] for detection of RHD exons 7, 5, 10 and intron 4 was performed and the results were compared to the serological results of cord blood cells as the gold standard method. SRY gene and hypermethylated. Ras-association domain family member 1 [RASSF1A] gene were used to confirm the presence of fetal DNA in male and female fetuses, respectively. Results: Out of 48 fetuses between 8 and 32 weeks [wks] of gestational age [GA], we correctly diagnosed 45 cases [93.75%] of RHD positive fetuses and 2 cases [4.16%] of the RHD negative one. Exon 7 was amplified in one sample, while three other RHD gene sequences were not detected; the sample was classified as inconclusive, and the RhD serology result after birth showed that the fetus was RhD-negative. Conclusion: Our results showed high accuracy of the qPCR method using cffDNA for fetal RHD genotyping and implicate on the efficiency of this technique to predict the competence of anti-D immunoglobulin administration.



## Professional Autonomy

### **Autonomy to the teaching hospitals in light of mti 2015 reform act; way forward**

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**JPMI-Journal of Postgraduate Medical Institute** 2016; 30 (1): 1-5

**Keywords:** Hospitals, Teaching; Health Care Reform; Health Services; Hospitalization

**Abstract:** The objective behind any health reform should be better quality, efficiency and sustainability of health care. Reform of the system is needed to achieve this. One important aspect of the reform is greater autonomy to the major teaching hospitals, including selected district hospitals. There should be a major effort to agree what is the intention behind autonomy and exactly what is expected to be passed to the control of the major hospitals in terms of autonomy for management decisions, financial procedures and performance, planning and development, human resource management and clinical performance 1. The principle of decisions made at the lowest level practical should prevail. This means that autonomy and decentralization should also be passed down within hospitals to departmental levels 2. Needless to mention that success of any reform agenda to be implemented rests on the agreement and full backing of the majority of the stakeholders.

## Professionalism

### **A case-based approach for teaching professionalism to residents with online discussions**

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**Journal of Advances in Medical Education and Professionalism** 2016; 4 (1): 1-7

**Keywords:** Teaching; Faculty; Learning; Internet; Residence Characteristics

**Abstract:** Introduction: Programs must demonstrate that their residents are taught and assessed in professionalism. Most programs struggle with finding viable ways to teach and assess this critical competency. UTHSCSA Family and Community Medicine Residency developed an innovative option for interactive learning and assessment of residents in this competency which would be transferable to other programs and specialties. Methods: The innovative approach uses an asynchronous online format on Blackboard. Threaded discussions on Blackboard require thoughtful reflective writing after case assessment and critical evaluation of other resident posts. Participation, content and progress of all resident postings are monitored by administrative staff and faculty. Faculty can further engage the residents at any point to deepen the discussion and learning. Results: 100% of all senior residents attained the required learning objectives. All were actively engaged in the assignments. Six cases have been developed using a Learning Matrix to demonstrate evaluation areas from the specialty specific competencies. Written feedback from residents verified the validity of case content in context of their current clinical practice. Postings by residents have provided value and insight for the faculty to access the professional development of our Family Medicine residents. The Clinical Competency Committee evaluates all third year residents using this information specific to the professionalism milestones. By using an asynchronous online approach to case discussion, all residents are involved with all aspects of this curriculum. Conclusions: More specific measurable learning outcomes are possible using this approach. Resident participation and engagement is easier to track and monitor than a lecture-based format and easier to capture valuable data than relying on evaluation feedback. Our Annual Review process will identify areas for improvement in the existing cases and help create supplemental cases based on a needs assessment by the faculty.

## Progesterone

### **antagonists and inhibitors**

#### **Role of antiprogesterone on the endometrium receptivity- a review**

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 290-293

**Keywords:** Endometrium; Receptors, Progesterone; Mifepristone; Uterine Hemorrhage

**Abstract:** Estrogen produces proliferation in the functional layer of the endometrium and the differentiation in the ciliated and secretory epithelium of the uterine tube. Progesterone produces differentiation in the functional layer of the endometrium and the produces mitosis in the stroma of the endometrium. These effects of the estrogen and progesterone are mediated through interactions with specific intracellular receptors<sup>1</sup>. Mifepristone [RU 486] is a steroid hormone with a chemical structure similar to natural hormone progesterone. It has been proposed that antiprogestins may be useful in the treatment of endometrial inflammatory disease and carcinoma +breast because these conditions are dependent on the ovarian receptors and have receptors for estrogen and progesterone. Anti-progesterone compounds can antagonize the biological action of the progesterone or inhibit the synthesis of progesterone. Mifepristone, [RU 486] has been found to be the most effective and is now used in practice.

## Prostatitis

### drug therapy

#### **Efficacy of compound therapy by ginseng and ciprofloxacin on bacterial prostatitis**

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**Cell Journal [Yakhteh]** 2016; 18 (1): 103-111

**Keywords:** Ciprofloxacin-pharmacology; Drug Therapy, Combination; Rats, Wistar; Prostate; Panax

**Abstract:** Objective: Genitourinary tract infections play a significant role in male infertility. Infections of reproductive sex glands, such as the prostate, impair function and indirectly affect male fertility. The general aim of this study is to investigate the protective effect of Korean red ginseng [KRG] on prostatitis in male rats treated with ciprofloxacin [CIPX]. Materials and Methods: In this experimental study, we randomly divided 72 two male Wistar rats into 9 groups. The groups were treated as follows for 10 days: i. Control [no medication], ii. Sham [[normal saline injection into the vas deferens and oral administration of phosphate-buffered saline [PBS]], iii. Ginseng, iv. CPIX, v. CIPX+ginseng, vi. Uropathogenic Escherichia coli [E. coli] [UPEC], vii. UPEC+ginseng, viii. UPEC+CIPX, and ix. UPEC+ginseng+CIPX. The rats were killed 14 days after the last injection and the prostate glands were removed. After sample preparation, routine histology was performed using hematoxylin and eosin staining. The terminal deoxynucleotidyl transferase mediated dUTP-biotin nick end labeling [TUNEL] method was used to determine the presence of apoptotic cells. Results: The severity score for acinar changes and inflammatory cell infiltration in the UPEC+CIPX group did not significantly different from the UPEC group. However this score significantly decreased in the UPEC+CIPX+ginseng group compared to the UPEC group. Apoptotic index of all ginseng treated groups significantly decreased compared to the UPEC and CPIX groups. Conclusion: These results suggested that ginseng might be an effective adjunct in CIPX treatment of prostatitis. The combined use ginseng and CIPX was more effective than ginseng or CIPX alone.

## Psychotherapy

#### **Effect of group positive psychotherapy on improvement of life satisfaction and the quality of life in infertile woman**

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**IJFS-International Journal of Fertility and Sterility** 2016; 10 (1): 105-112

**Keywords:** Quality of Life; Personal Satisfaction; Infertility, Female; Depression; Surveys and Questionnaires

**Abstract:** Background: Positive psychotherapy is one of the new approaches in psychology which is innovated for treating psychological disorders and enhancing positive emotions. The aim of this study is to investigate the effectiveness of the group positive psychotherapy on elevation of life satisfaction and quality of life in infertile women. Materials and Methods: In a randomized trial study, Beck Depression Inventory II [BDI-II] and clinical interview were used in a pre-test post-test control group design. After analyzing the result of the questionnaire, 36 infertile women who showed signs of mild to moderate depression were randomly placed into two following groups: control [n=18] and intervention [n=18]. Before the treatment, the members of both groups answered BDI-II, Satisfaction With Life Scale [SWLS] and 12 item Short Form Health Survey [SF-12]. The intervention group received six sessions of group positive psychotherapy, but the treatment of the control group began six weeks after the intervention group. Results: The

results showed that the life satisfaction scores of the intervention group were significantly elevated from 22.66 in pre-test to 26.13 in post-test [ $P<0.001$ ], while this improvement was not significant in the control group [ $P=0.405$ ]. The difference between life satisfaction scores of the intervention and the control groups was also significant [ $F=8.92$ ,  $P=0.006$ ]. However, no significant change in the quality of life level of the intervention and control groups was observed [ $P=0.136$ ]. Conclusion: Thus it can be deduced from the findings that this treatment method could be introduced as solution to increase the life satisfaction in infertile women, but not as a treatment for elevating their quality of life [Registration Number: IRCT2013042810063N3].

## Public Health

### **WHO events addressing public health priorities**

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**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (1): 64-71

**Keywords:** World Health Organization; Health Priorities; Ethics

## Pyruvates

### **therapeutic uses**

#### **Ethyl pyruvate ameliorates the damage induced by cyclophosphamide on adult mice testes**

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**IJFS-International Journal of Fertility and Sterility** 2016; 10 (1): 79-86

**Keywords:** Cyclophosphamide-adverse effects; Testis; Mice; Protective Agents

**Abstract:** Background: Cyclophosphamide [CP] is a chemotherapy drug which causes deleterious effects on testicular tissue and increases free radicals in the body. The aim of this study is to investigate the protective effects of ethyl pyruvate [EP] on testicular improvement in CP treated animals. Materials and Methods: In this experimental study, 15 male mice [6-8 weeks] were divided into 3 groups. The control group received normal saline [0.1 ml/day] intraperitoneal [IP], CP group received CP [15 mg/kg/week, IP], and the CP+EP group received EP [40 mg/kg/day, IP] plus CP. After 35 days, we assessed serum total antioxidant capacity [TAC] along with histomorphometric and histochemical analyses of the testicles. Results: The mean thickness of the germinal epithelium, diameter of seminiferous tubules, and the number of Leydig cells in the CP+EP group were higher than those of the CP group [ $P<0.05$ ]. The number of the mast cells in the CP+EP group significantly reduced compared with the CP group [ $P<0.05$ ]. Alkaline phosphatase [ALP], periodic acid-schiff [PAS] positive reactions and lipid granules in cytoplasm of the Leydig cells in the CP group increased compared with the other groups [ $P<0.05$ ]. TAC in the CP group significantly reduced compared with the other groups [ $P<0.05$ ]. Conclusion: This study showed the ability of EP to reduce the destructive side effects of CP in the adult mice reproductive system.

## Quality of Life

#### **Measuring health-related quality of life in the population of Tetouan, Morocco, by the SF-36: normative data and the influence of gender and age**

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**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (2): 133-141

**Keywords:** Gender Identity; Surveys and Questionnaires; Age Factors; Mental Health

**Abstract:** Measuring health-related quality of life [HRQOL] is an essential complement to medical evaluation. However, few studies of this type have been conducted in Morocco. This study aims to develop normative data for the SF-36 and analyse the HRQOL according to gender and age in the population of Tetouan city, Morocco. The SF-36 was administered to a sample selected by quotas containing 385 subjects aged over 16 years living in Tetouan. Comparisons of means were done to determine the significance of differences. The study population

perceived mental health to be worse than physical health. Men presented significantly higher mean scores than women for all domains of the SF-36. Perceived health, especially physical health, declines with age, and so participants over the age of 55 years recorded a poor perception of their health in the majority of domains measured. The results highlight the vulnerability of the two groups: women and the elderly.

## Radiation-Protective Agents

### **Micronuclei assessment of the radioprotective effects of melatonin and vitamin c in human lymphocytes**

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**Cell Journal [Yakhteh]** 2016; 18 (1): 46-51

**Keywords:** Melatonin; Ascorbic Acid; Free Radical Scavengers; In Vitro Techniques; Lymphocytes

**Abstract:** Objective: Critical macromolecules such as DNA may be damaged by free radicals that are generated from the interaction of ionizing radiation with biological systems. Melatonin and vitamin C have been shown to be direct free radical scavengers. The aim of this study was to investigate the in vivo/in vitro radioprotective effects of melatonin and vitamin C separately and combined against genotoxicity induced by 6 MV x-ray irradiation in human cultured blood lymphocytes. Materials and Methods: In this experimental study, fifteen volunteers were divided into three groups of melatonin, vitamin C and melatonin plus vitamin C treatment. Peripheral blood samples were collected from each group before, and 1, 2 and 3 hours after melatonin and vitamin C administration [separately and combined]. The blood samples were then irradiated with 200 cGy of 6 MV x-ray. In order to characterize chromosomal aberrations, the lymphocyte samples were cultured with mitogenic stimulus on cytokinesis-blocked binucleated cells. Results: The samples collected 1 hour after melatonin and vitamin C [separately and combined] ingestion exhibited a significant decrease in the incidence of micronuclei compared with their control group [ $P < 0.05$ ]. The maximum synergistic protection and reduction in frequency of micronuclei [57%] was observed 1 hour after vitamin C and melatonin administration combined. Conclusion: We conclude that simultaneous administration of melatonin and vitamin C as radioprotector substances before irradiation may reduce genotoxicity caused by x-ray irradiation.

## Radiology, Interventional

### **Assessment of level of awareness and knowledge of interventional radiology among medical students at a Pakistani institution**

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**JPMI-Journal of Postgraduate Medical Institute** 2016; 30 (1): 66-70

**Keywords:** Students, Medical; Health Knowledge, Attitudes, Practice; Cross-Sectional Studies; Surveys and Questionnaires; Awareness

**Abstract:** Objectives: To evaluate the level of knowledge and interest in Interventional Radiology [IR] among medical students at a Pakistani Medical Institution. Methods: After ethical review board approval, a cross sectional study was conducted based on a survey distributed among 600 medical students at a Pakistani 5 year medical school. 288 [48%] responses were received. Survey was based on 16 questions assessing knowledge, interest and perception of Interventional Radiology. Results: Among 288 respondents, 112 [39%] reported poor knowledge regarding IR; 132 [45%] had never been exposed to IR. Only 46 [16%] students chose to consider a career in IR. Main reasons for not considering a career in IR were lack of knowledge [49%] or lack of interest [34%]. Hundred students [34%] could correctly identify at least one IR procedure; 192 [66%] students were unclear regarding routine duties of Interventional Radiologist as part of a multidisciplinary team; 192 [66%] students stated that a 2 week radiology rotation would be sufficient; 168 [58%] stated that a mandatory 2 week core rotation in IR should be incorporated. IR lectures were rated as the most effective means of learning. Conclusion: Although level of knowledge and exposure to IR among medical students was suboptimal, they showed interest in learning more about this specialty. This deficit needs to be addressed in the undergraduate medical curriculum, not only to attract future innovators for continued growth of this specialty, but also to increase awareness among future referring physicians.

## Reproductive Health Services

### **Exploring the characteristics of public reproductive health services in the Islamic Republic of Iran from the perspectives of unmarried women: what needs to be changed?**

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**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (2): 116-123

**Keywords:** Reproductive Health; Health Services; Single Person; Public Health; Surveys and Questionnaires; Women

**Abstract:** This qualitative study in the Islamic Republic of Iran aimed to explore facilitators and barriers to the use of reproductive health services by unmarried women. A purposive sample of unmarried women aged 25-60 years in Isfahan city were interviewed about their experiences of reproductive health services in public health centres. Content analysis of responses revealed that the favourable characteristics of reproductive health services in public centres were services that: were delivered by personnel of the same sex in a woman-friendly environment and available at a suitable price, and did not label clients. In contrast, the following characteristics made public health centres undesirable for unmarried women: not addressing single women for reproductive health services; lack of privacy; failure to maintain confidentiality; doubts about skills and scientific ability of personnel; and lack of integration of services.

## Research

### **Research priorities in medical education at Shiraz University of Medical Sciences: categories and subcategories in the Iranian context**

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**Journal of Advances in Medical Education and Professionalism** 2016; 4 (1): 26-32

**Keywords:** Education, Medical; Delphi Technique; Surveys and Questionnaires

**Abstract:** Introduction: Research in education is a globally significant issue without a long history. Due to the importance of the issue in Health System Development programs, this study intended to determine research priorities in medical education, considering their details and functions. By determining barriers existing in research in education progress, it is tried to make research priorities more functional by recommending acceptable strategies. Methods: This is a qualitative-descriptive study in two descriptive phases. The goal of these phases was to determine research priorities subcategories in medical education by Nominal Group Technique [NOT] and two rounds of Delphi method. Through the first phase, subcategories of research priorities were determined, using Nominal Group Technique under medical education experts' supervision. Through two rounds of Delphi, a questionnaire was constructed based on the subcategories. Eventually, research priorities were determined based on their highest score [scores more than 7 out of 10]. Results: In the first phase [NGT], 35 priorities in 5 major fields of medical education were presented. In the second phase, priorities were scored, using Delphi method. Medical Ethics and professionalism gained the highest scores [7.63 +/- 1.26] and educational evaluation the lowest [7.28 +/- 1.52]. In this stage, 7 items were omitted but 2 of them were added again after experts' revision in the third round of Delphi. Conclusion: According to the results of the present study and based on previous studies, it really seems that the fields of [Learning and Teaching Approaches] and [Medical Ethics and Professionalism] were more important. Because of financial and resource limitations in our country and the importance of research priorities, it is recommended to frequently study "research priorities determination program" at universities.

## Respiratory Tract Infections

### **Acute lower respiratory tract infection; therapeutic role of zinc in patients**

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**Professional Medical Journal-Quarterly [The]** 2016; 23 (1): 65-70

**Keywords:** Zinc-therapeutic uses; Zinc-pharmacology; Acute Disease

**Abstract:** ABSTRACT: Zinc is an essential micronutrient with catalytic role in over a hundred specific metabolic enzymes in human metabolism regulates the expression of the metallothionein gene, apoptosis and synaptic signaling and needed for many aspects of immune system. Thus the zinc 'supplementation in patients with acute lower

respiratory tract infections might have potential benefits. Objectives: To evaluate the efficacy of zinc supplementation in patients with acute lower respiratory tract infections. Study design: Quasi experimental study. Setting: Study was conducted in the pediatrics department Independent hospital Faisalabad; the indoor patients meeting the inclusion criteria from 26<sup>th</sup> January to 25<sup>th</sup> July 2013 were included in study. Material and methods: 100 children meeting the inclusion criteria were included in the study which were divided into two groups with random allocation i.e. Group A [Odd number] and Group B [Even number]. Group A was given zinc supplementation 20mg of elemental zinc for 14 days. Along with antimicrobials, oxygen and antipyretics for fever while 50 children in Group B were given with antimicrobials. Oxygen and antipyretics for fever without zinc. Results: Baseline clinical parameters were comparable in both groups at admission. Outcome measures considered were duration of fever, tachypnoea, chest indrawings and total duration of hospital admission. Effect of zinc supplementation is significant with p-value of less than 0.05 for duration of tachypnoea and chest indrawings and total duration of hospital admission while result showed p-value equal to 0.05 that is just significant for duration of fever.

### **Healthcare-seeking behaviors for acute respiratory illness in two communities of Java, Indonesia: a cross-sectional survey**

Praptiningsih, Catharina Y.; Lafond, Kathryn E.; Wahyuninerum, Yunita; Storms, Aaron D.; Mangiri, Amalya; Iuliano, Angela D.; Samaan, Gina; Titaley, Christiana R.; Yelda, Fitra; Kreslake, Jennifer; Storey, Douglas; Uyeki, Timothy M  
US Centers for Disease Control and Prevention

**Journal of Epidemiology and Global Health** 2016; 6 (2): 77-86

**Keywords:** Delivery of Health Care; Surveys and Questionnaires; Public Health; Cross-Sectional Studies

**Abstract:** Understanding healthcare-seeking patterns for respiratory illness can help improve estimations of disease burden and inform public health interventions to control acute respiratory disease in Indonesia. The objectives of this study were to describe healthcare-seeking behaviors for respiratory illnesses in one rural and one urban community in Western Java, and to explore the factors that affect care seeking. From February 8, 2012 to March 1, 2012, a survey was conducted in 2520 households in the East Jakarta and Bogor districts to identify reported recent respiratory illnesses, as well as all hospitalizations from the previous 12-month period. We found that 4% [10% of those less than 5 years] of people had respiratory disease resulting in a visit to a healthcare provider in the past 2 weeks; these episodes were most commonly treated at government [33%] or private [44%] clinics. Forty-five people [0.4% of those surveyed] had respiratory hospitalizations in the past year, and just over half of these [24/45, 53%] occurred at a public hospital. Public health programs targeting respiratory disease in this region should account for care at private hospitals and clinics as well as illnesses that are treated at home in order to capture the true burden of illness in these communities.

## Retinopathy of Prematurity

### **surgery**

### **Transpupillary diode laser retinal photocoagulation for the treatment of retinopathy of prematurity: experience in Southern Iran**

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (1): 73-74

**Keywords:** Laser Coagulation; Lasers, Semiconductor; Pupil; Retrospective Studies; Blindness; Critical Care

## Rubella virus

### **Estimation of the cultured cells' volume and surface area: application of stereological methods on vero cells infected by Rubella virus**

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (1): 37-43

**Keywords:** Vero Cells; Cells, Cultured; Cell Size; Infection

**Abstract:** Background: Morphological changes of the cells infected with rubella virus cannot be observed easily. Estimation of the size of the cultured cells can be a valuable parameter in this condition. This study was conducted to find answers to the following questions: - How much time after infection with rubella virus, the volume and surface area

of the Vero cells and their nuclei get started to change? - How is it possible to apply stereological methods to estimate the volume and surface area of the cultured cells using the invariator, nucleator, and surfactor techniques? Methods: The cultured Vero cells were infected with rubella virus. The cells of the control and experimental groups were harvested at 2, 4, 8, 24, and 48 hours following the incubation period. The cells were processed and embedded in paraffin. Invariator, nucleator, and surfactor were applied to estimate the size of the Vero cells and their nuclei. Results: The cell volume was decreased by 15-24%, 48 hours after the infection in comparison to the non-infected cells. Besides, the cell surface area was decreased by 13%, 48 hours after the infection. However, no changes were detected in the nuclei. The values of the standard deviation and coefficient of variation of the cells, estimated by invariator, were lower compared to those measured by the nucleator or surfactor. Conclusion: In this study, the volume and surface area of the Vero cells were reduced by rubella virus 48 hours after infection. Invariator is a more precise method compared to nucleator or surfactor.

## Salmonella enterica

### genetics

#### **Distribution and factors associated with Salmonella enterica genotypes in a diverse population of humans and animals in Qatar using multi-locus sequence typing [MLST]**

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**Journal of Infection and Public Health** 2016; 9 (3): 315-323

**Keywords:** Multilocus Sequence Typing; Genotype; Cross-Sectional Studies; Gastroenteritis; Animals; Risk Factors

**Abstract:** Salmonella enterica is one of the most commonly reported causes of bacterial foodborne illness around the world. Understanding the sources of this pathogen and the associated factors that exacerbate its risk to humans will help in developing risk mitigation strategies. The genetic relatedness among Salmonella isolates recovered from human gastroenteritis cases and food animals in Qatar were investigated in the hope of shedding light on these sources, their possible transmission routes, and any associated factors. A repeat cross-sectional study was conducted in which the samples and associated data were collected from both populations [gastroenteritis cases and animals]. Salmonella isolates were initially analyzed using multi-locus sequence typing [MLST] to investigate the genetic diversity and clonality. The relatedness among the isolates was assessed using the minimum spanning tree [MST]. Twenty-seven different sequence types [STs] were identified in this study; among them, seven were novel, including ST1695, ST1696, ST1697, ST1698, ST1699, ST1702, and ST1703. The pattern of overall ST distribution was diverse; in particular, it was revealed that ST11 and ST19 were the most common sequence types, presenting 29.5% and 11.5% within the whole population. In addition, 20 eBurst Groups [eBGs] were identified in our data, which indicates that ST11 and ST19 belonged to eBG4 and eBG1, respectively. In addition, the potential association between the putative risk factors and eBGs were evaluated. There was no significant clustering of these eBGs by season; however, a significant association was identified in terms of nationality in that Qataris were six times more likely to present with eBG1 compared to non-Qataris. In the MST analysis, four major clusters were presented, namely, ST11, ST19, ST16, and ST31. The linkages between the clusters alluded to a possible transmission route. The results of the study have provided insight into the ST distributions of *S. enterica* and their possible zoonotic associations in Qatar. Published by Elsevier Limited on behalf of King Saud Bin Abdulaziz University for Health Sciences.

## Scalp Dermatoses

### epidemiology

#### **Hair and scalp disorders in a Tuscan pediatric dermatological outpatient clinic: a clinical and epidemiological evaluation**

Conti, Rossana; Colucci, Roberta; Arunachalam, Meena; Berti, Samantha; Fabroni, Caterina; De Martino, Maurizio; Dragoni, Federica; Lazzeri, Linda; Pisaneschi, Lisa; Moretti, Silvia

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**Medical Principles and Practice** 2016; 25 (1): 67-71

**Keywords:** Scalp; Hair Diseases-epidemiology; Pediatrics; Child; Ambulatory Care Facilities; Retrospective Studies

**Abstract:** Objectives: The aim of this study was to evaluate the clinical and epidemiological profile of hair and scalp disorders in children referred to the Pediatric Dermatology Outpatient Clinic. Materials and Methods: We performed a retrospective study of children with hair loss problems or scalp diseases who turned to the Pediatric Dermatology Service, Anna Meyer Pediatric Hospital, Florence, Italy, from January 1, 2009, to December 31, 2009. Demographics, personal and familial medical history, laboratory tests, clinical examination, final diagnosis and therapeutic interventions were obtained from the manual chart review. Results: Of the 2,640 children who had access to the Pediatric Dermatology Service, 190 [7.19%] had a hair or scalp disorder. Among the 190 children, 60 [31.57%] presented with nonscarring alopecia, 56 [29.47%] had benign neoplasias, hamartomas or vascular malformations of the scalp, 51 [26.84%] had scalp inflammatory diseases, 14 [7.36%] had scarring alopecia, 5 [2.63%] had infections and 2 [1.05%] had infestation of the scalp. A case of constitutional hypertrichosis [0.52%] and also a case [0.52%] of lamellar ichthyosis were diagnosed. Conclusions: Our results underline that hair and scalp diseases represent an important percentage of admittances to a dermatological pediatric outpatient clinic. The variety and complexity of the diseases observed in this study included diseases commonly found also in adulthood.

## Schizophrenia

### drug therapy

#### Frequency of psychotropic drugs use by patients with schizophrenia in eight years follow-up

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**JPMI-Journal of Postgraduate Medical Institute** 2016; 30 (1): 48-51

**Keywords:** Psychotropic Drugs; Carbamazepine; Risperidone; Benzodiazepines; Fluoxetine

**Abstract:** Objective: To measure the frequency of various psychotropic drugs used by patients with schizophrenia in 8 years follow up. Methodology: It was a descriptive observational study. This study was conducted at Department of Psychiatry Lady Reading Hospital Peshawar from 2004 to 2012. A sample of 52 patients diagnosed as schizophrenics was included through consecutive sampling. These patients were part of a project known as Severe Mental Illness [SMI]. They were regularly assessed once in a month and were provided antipsychotic, antidepressants and mood stabilizers. Results: The study included 52 [n = 52] patients. Males were 33 [62%] and females were 19 [37%]. Age of patients ranged from 15-60 with the mean age of 28.82 +/- 10.67. Mean age of males was 31.08 +/- 9.66 and of females was 25.84 +/- 11.43. Number of visits missed during the study was 2%. Fifty two% of patients were stable on 4mg of risperidone per day. Fifty percent of the patients were stable on 5 to 10mg of olanzapine per day. Depot preparation was required by 38% and less than 50% of the patients required carbamazepine as mood stabilizers from 200 to 400mg per day. Twenty three percent of the patients required 20gm of fluoxetine per day. Conclusion: During 8 years follow up the most frequent anti psychotic drugs used by patient to remain stable were risperidone 4mg per day followed by olanzapine 5 to 10 mg per day.

## Schools, Medical

#### Technical efficiency of Shiraz school of medicine in research and education domains: a data envelopment analysis

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**Journal of Advances in Medical Education and Professionalism** 2016; 4 (1): 13-20

**Keywords:** Efficiency; Cross-Sectional Studies; Retrospective Studies; Research

**Abstract:** Introduction: Efficiency evaluation of universities and faculties is one of the tools that help managers to identify the departments' strengths and weakness. The main objective of the present research was to measure and compare the technical efficiency of Shiraz school of medicine departments using Data Envelopment Analysis [DEA] technique. Methods: This cross-sectional and retrospective study was performed on clinical and non-clinical departments in research and education domains over the period of 2006 to 2011. Different inputs and outputs were considered for research and educational domain separately. Efficiency was measured based on the observed optimal performance. Results: Findings showed that pathology and anatomy departments achieved the score of 100 in technical efficiency in education during 2006 to 2011. During this period, parasitology, psychiatric and pediatrics



department's achieved the score of 100 for technical efficiency in research domain. The lowest mean of relative educational efficiency belonged to orthopedic department; as to relative research efficiency, the lowest mean was shown in orthopedics and genetics departments. The mean technical efficiency of non-medical departments in education and research domain was 91.93 and 76.08, respectively, while the mean technical efficiency of the clinical department in educational and research fields was 91.02 and 82.23, respectively. Conclusion: Using multiple input and output in DEA technique provided a comprehensive evaluation of efficiency in Shiraz school of medicine departments. The DEA could successfully estimate the technical efficiency of the departments in research and educational fields. Moreover, the deficiency in each department was found; this could help them to plan for improvement.

## Seizures

### **Neuroimaging evaluation for first attack of unprovoked nonfebrile seizure in pediatrics: when to order?**

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**Medical Principles and Practice** 2016; 25 (1): 56-60

**Keywords:** Moyamoya Disease; Neuroimaging; Pediatrics; Retrospective Studies; Magnetic Resonance Imaging; Cone-Beam Computed Tomography

**Abstract:** Objective: To assess the value of neuroimaging studies in evaluating pediatric patients presenting with a first attack of nonfebrile seizure. Method: We reviewed the medical records of pediatric patients aged 28 days to 12 years who were admitted between 1 January and 31 December 2013 with a first attack of unprovoked, afebrile seizure. These patients had undergone neuroimaging studies. The exclusion criterion was patients with known predisposing conditions for seizure. The computed tomography [CT] scan and magnetic resonance imaging [MRI] results were either normal or abnormal, and the abnormal ones were further classified into clinically insignificant or significant. Descriptive analysis was performed to summarize the data. Result: Fifty children were identified with a mean age of 5.2 +/- 3.8 years. Of the 50 subjects, 29 [58.0%] were males and 21 [42.0%] were females. Sixteen patients [32.0%] had abnormal neuroimaging studies [CT scan, MRI or both]; however, only 1 was considered to have a clinically significant abnormality, later diagnosed as Moyamoya disease. Conclusion: In this study, the neuroimaging studies were found not to be useful in evaluating pediatric patients presenting with a first attack of unprovoked, nonfebrile seizures.

## Shigella

### **The detection and antimicrobial susceptibility profile of Shigella isolates from meat and swab samples at butchers' shops in Gondar town, Northwest Ethiopia**

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**Journal of Infection and Public Health** 2016; 9 (3): 348-355

**Keywords:** Cross-Sectional Studies; Drug Resistance, Multiple; Prevalence; Drug Resistance, Microbial; Cattle; Meat; Foodborne Diseases

**Abstract:** Food borne pathogens are major causes of deaths, illnesses and billions of dollars of expenses. The burden of food borne illness is worsened by the ever increasing rate of antimicrobial resistance microbes. Shigella, a bacterial pathogen associated with food, is reported to account for higher prevalence rates of food borne illness in different settings. A cross-sectional study was conducted from February 10 to June 30, 2013, at the butcher houses of Gondar town in the Northwest of Ethiopia to assess the prevalence and antimicrobial susceptibility pattern of Shigella. Cattle raw meat and swab samples from selected critical control points, including knives, chopping boards, and the hands and noses of butchers, were collected and analyzed. The identification of Shigella was carried out using colony characteristics, the Gram reaction, and biochemical tests. Antimicrobial susceptibility testing was performed using the Kirby-Bauer disc diffusion method. The overall hygienic status of the butcher shops was also assessed using a checklist. An observational analysis revealed that the sanitary condition of the butcher shops and their premises was poor. Of 306 samples screened, 10.5% were positive for Shigella. Approximately 7.4% of meat samples and 10.2% of swab samples were contaminated with Shigella. Out of the total Shigella isolates, 90.6%, 46.9%, 18.8% and 9.4% were resistant to ampicillin, amoxicillin, ceftriaxone and tetracycline, respectively. A. mul-tidrug resistance pattern was recorded in 27.8% of the isolates. In conclusion, the safety of meat sold at Gondar butchers houses was poor. The identified Shigella isolates showed high levels of drug resistance and multidrug resistance patterns for commonly used

antimicrobials in veterinary and human medicine. Practicing wise use of antimicrobials and strict sanitary interventions at different critical control points is strongly recommended, in addition to further in-depth studies to prevent unprecedented consequences from shigellosis.

## Smoking

### epidemiology

#### **Prevalence of and factors associated with smoking among students in Sousse, Tunisia**

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**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (1): 40-47

**Keywords:** Cross-Sectional Studies; Surveys and Questionnaires; Students; Prevalence; Tobacco

**Abstract:** Within the framework of the fight against tobacco among young people, we conducted a descriptive cross-sectional study in 2013 to estimate the prevalence of smoking and to identify associated factors among students in Sousse. A questionnaire was administered to a representative sample of 556 students in 5 academic institutions in Sousse randomly drawn. The age of the participants was between 17 and 35 years. The prevalence of tobacco consumption in the past 12 months was 22.1% and consumption during the past 3 months was 65.3%. The average age of starting smoking was 17 years. Smoking prevalence was significantly higher for males [ $P < 0.001$ ] and those aged over 25 years [ $P = 0.002$ ]. Students from 2 of the institutions were using more tobacco than their colleagues in the other institutions [ $P = 0.027$ ]. The high prevalence of smoking found among the students means that prevention measures are essential; this requires increasing self-esteem and evaluating intervention programmes implemented before smoking the first cigarette.

## Spermatozoa

#### **Combined effect of trolox and EDTA on frozen-thawed sperm quality**

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (3): 230-237

**Keywords:** Edetic Acid; Chromans; Sperm Motility; Freezing; Acrosome

**Abstract:** The freezing and thawing process not only is associated with serious damage to sperm such as damage to the plasma membrane and the acrosomal membrane but also changes the membrane permeability to some ions including calcium. Also, the generation of oxygen free radicals is increased during the freezing-thawing process. The purpose of this study was to evaluate the effects of Trolox as an antioxidant and edetic acid [EDTA] as a calcium chelator on frozen-thawed [FT] sperm and compare these effects with those on fresh sperm. This study was done on these men of 25 healthy men, who referred to Shiraz Infertility Center between 2012 and 2013. Normal samples were transferred to the Reproductive Physiology Laboratory, Department of Physiology, Shiraz University of Medical Sciences, Shiraz. The samples were divided into two groups randomly: fresh and FT sperm groups. Each group was divided into five subgroups: control group, the solvent group [0.1% dimethyl sulfoxide [DMSO]], Trolox group [200 microM], EDTA group [1 mM], and Trolox+EDTA group. The percentages of motility, viability, and acrosome-reacted sperm were tested. The percentages of motility and viability in the FT sperm were lower than those in the fresh sperm. The progressive motility of the FT sperm was improved nonsignificantly with Trolox+EDTA. However, the effect of Trolox+EDTA on the progressive motility of the FT sperm was much more than that on the fresh sperm. The fewest acrosome-reacted sperm were observed in the EDTA-containing FT sperm. Antioxidant supplementation or omission of extracellular calcium may partly improve motility and also reduce acrosomal damage in FT sperm.

## Spondylolisthesis

### surgery

#### **Surgical outcome of reduction and instrumented fusion in lumbar degenerative spondylolisthesis**

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (1): 13-18

**Keywords:** Lumbar Vertebrae; Spinal Fusion; Patient Outcome Assessment; Decompression, Surgical; Surveys and Questionnaires

**Abstract:** Background: Lumbar degenerative spondylolisthesis [LDS] is a degenerative slippage of the lumbar vertebrae. We aimed to evaluate the surgical outcome of degenerative spondylolisthesis with neural decompression, pedicular screw fixation, reduction, and posterolateral fusion. Methods: This before-after study was carried out on 45 patients [37 female and 8 male] with LDS operated from August 2008 to January 2011. The patients' pain and disability were assessed by visual analogue scale [VAS] and Oswestry disability index [ODI] questionnaire. In surgery, we applied distraction force to facilitate slip reduction. All the intra- and postoperative complications were recorded. The paired t-test and Pearson correlation coefficient were used for statistical analysis. Results: The mean age of patients and mean follow-up period were 58.3 +/- 3.5 years and 31.2 +/- 4.8 months, respectively. The mean slip correction rate was 52.2% with a mean correction loss of 4.8%. Preoperative VAS and ODI improved from 8.8 and 71.6 to postoperative 2.1 and 28.7, respectively. Clinical improvement was more prominent in more reduced patients, but Pearson coefficient could not find a significant correlation. Conclusion: Although spinal decompression with fusion and posterior instrumentation in surgical treatment of the patients with LDS result in satisfactory outcome, vertebral reduction cannot significantly enhance the clinical improvement.

## Staphylococcus aureus

#### **Are the leading drugs against Staphylococcus aureus really toxic to cartilage?**

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**Journal of Infection and Public Health** 2016; 9 (3): 251-258

**Keywords:** Staphylococcal Infections-therapy; In Vitro Techniques; Drug-Related Side Effects and Adverse Reactions; Chondrocytes; Vancomycin; Teicoplanin; Linezolid; Orthopedics

**Abstract:** Many studies have shown that the toxic effects of local antibiotics on bone and cartilage limit orthopedic surgeons. In this study, we evaluated three antibacterial agents used locally to treat highly mortal and morbid diseases in the field of orthopedics, such as septic arthritis. Are vancomycin, teicoplanin, and linezolid, which are archenemies of Staphylococcus aureus, really toxic to chondrocytes? The purpose of the study was to investigate the effects of antibiotics, which are used against S. aureus, on human chondrocytes in vitro. Primary cell cultures obtained from gonarthrosis patients were divided into two main groups. One of these groups was designated as the control chondrocyte culture. The other group was divided into three subgroups, and each group was exposed to vancomycin, teicoplanin, or linezolid. Cell culture samples were characterized by immunophenotyping following incubation with the three different antibiotics. Before and after the agents were administered, the cultures were subjected to inverted and environmental scanning electron microscopy. The number of live cells and the proliferation rate were monitored with the MTT-assay. We found that vancomycin, teicoplanin, and linezolid do not have chondrotoxic effects. Vancomycin, teicoplanin, and linezolid had no chondrotoxic activity during in vitro culture, which supports the argument that these agents can safely be used in orthopedic surgery, especially against methicillin-resistant S. aureus agents.

## STAT1 Transcription Factor

### Detection of stat-1 in patients co-infected with hepatitis b and c resistant to interferon

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 216-220

**Keywords:** Interferons; Coinfection; Hepatitis B; Hepatitis C; Cross-Sectional Studies

**Abstract:** Objective: Current study was designed to determine the STAT-1 in co-infected patients of hepatitis B and C resistant to interferon therapy. Study Design: Cross-sectional analytical study. Place and Duration of Study: Department of Biochemistry and Molecular Biology and Gastroenterology departments of various hospitals of Rawalpindi. Material and Methods: The study included 15 co-infected patients of hepatitis B and C resistant to interferon therapy and 15 healthy individuals as control. Methodology: Detection of STAT-1 was done by conventional PCR technique. Results: Sixty seven percent of the patients were expressing STAT-1 in their blood while 33% of the patients did not have STAT-1. Controls showed 57% detection of STAT-1 and 43% did not exhibit STAT-1. Mean age of the patients and controls was 35.90. +/- 8.95. Comparison between patients and controls was done by chi square test. Fisher exact probability value obtained was 0.287 which was not significant. Conclusion: Patients suffering from hepatitis B and C co-infection resistant to interferon therapy revealed higher detection of STAT-1 which indicate greater liver damage, fibrosis and an extensive and severer disease course in co-infection.

## Stress Disorders, Post-Traumatic

### The prevalence of post traumatic growth among troops in post deployment phase

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 275-280

**Keywords:** Combat Disorders; Cross-Sectional Studies; Growth; Prevalence

**Abstract:** Objective: To determine the prevalence of post-traumatic growth [PTG] and its association with socio demographic factors among a cohort of troops in post deployment phase. Study Design: Descriptive cross sectional. Place and Duration of Study: A Military battalion in Lahore from Jan-April 2015, one year after deployment in the combat area. Material and Methods: A sample of 296 combat troops was selected using non-probability convenient sampling technique. After taking informed written consent the data was collected using Urdu version of psychometric tool Post Traumatic Growth Inventory [PTGI]. Data was entered and analyzed SPSS version 20. Results: The mean age of the respondents was 29 +/- 6.2 years. Married and unmarried were 214 [72.3%] and 82 [27.7%] respectively. The mean years of service of the troops were 11. In our study the majority of troops 279[94.3%] exhibited greater degree of positive growth. [75] , 15 [5.1%] had moderate degree of positive growth [74-51] while only 2[0.7%] had no post traumatic growth[<50]. There was a significant negative correlation of PTG with the age [p < 0.01] and a significant association of Ethnicity with PTG [p=0.03]. However there was no significant association of PTG with marital status [p= 0.06], education [7=0.52], income [p=0.71], rank [p= 0.96] and years of service [p= 0.49] at 95% confidence level. Conclusion: It was concluded that there was a high prevalence of resilience as PTG in majority of troops one year after deployment in a combat area.

## Stroke

### Age and stroke severity: hazards for intravenous thrombolysis?

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**Medical Principles and Practice** 2016; 25 (1): 99-100

**Keywords:** Age Factors; Thrombolytic Therapy; Administration, Intravenous

## Students, Dental

### Assessment of dental students' communication skills with patients

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**Journal of Advances in Medical Education and Professionalism** 2016; 4 (1): 33-38

**Keywords:** Education, Dental; Communication; Patients; Surveys and Questionnaires; Cross-Sectional Studies

**Abstract:** Introduction: Establishment of effective communication between the clinician and patient is essential in order to increase the effectiveness of treatment. These skills have been less investigated among dental students. This study aimed to evaluate communication skills of dental students in Shiraz with patients through direct observation, patients' perspectives and students' self-assessments. Methods: This cross-sectional study enrolled the fifth and sixth year dental students and one of each student's patients who was chosen using simple random sampling method. We used a checklist for data collection. Students' communication skills were assessed at three steps of the student-patient interview - at the beginning of the interview, during the interview, and at the end of the interview. The checklist was completed by three groups: 1] an observer, 2]] the patient and 3] the student, as self-assessment. The validity of the checklist was confirmed by clinical professors and the reliability was determined by Cronbach's alpha test. Data were analyzed using descriptive statistics and Student's t test. A repeated measure MANOVA was used to compare the mean communication skills in the researcher, patients, and students at each step of the patient interviews. Results: There were 110 students [mean age: 22.3 +/- 8.4 years] and 110 patients [mean age: 32. +/- 8.8 years] who completed the checklists. Overall, the communication skills of dental students were rated as good according to the patients. However, the observer and student participants rated the skills at the moderate level. We observed significant differences between communication skills in all three groups and in the three steps of the patient interviews [ $p < 0.001$ ]. According to patients' beliefs and students' self assessments, there were no differences between male and female students in communication skills in the three steps of the patient interviews [all  $p > 0.05$ ]. However from the observer's viewpoint, female students showed better communication skills during the interviews [ $p < 0.001$ ]. Conclusion: There was a degree of failure in communication skills of dental students with patients in the interview process. It will be necessary that communication skills be taught, particularly for students involved in clinical practice.

## Students, Medical

### Assessment of students' perspectives about master of public health program in medical school of Shiraz University

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**Journal of Advances in Medical Education and Professionalism** 2016; 4 (1): 39-43

**Keywords:** Schools, Medical; Education, Medical; Cross-Sectional Studies; Surveys and Questionnaires; Public Health

**Abstract:** Introduction: Integration of public health and medical education has been thought to have an important role in medical students' training. Shiraz University of Medical Sciences has developed an MD/MPH dual degree educational program for the talented volunteer students. The aim of this study was to assess the students' viewpoints about various aspects of Shiraz MD/MPH program. Methods: This cross-sectional study was conducted on Shiraz undergraduate medical students, who were enrolled in MD/MPH program. A self-structured questionnaire in Persian consisting of 4 parts was used; it included demographic factors including 16 questions which evaluated the students' perspective of the goals, content, skill development, applicability and meeting their expectations; 7 questions evaluating the self-reported increase of knowledge; and 3 multiple choice questions to assess the students' motivations and opinions on the impact of the program on their future career. Descriptive statistics was used for data analysis. Results: All MD/MPH students [89] with a mean age of 21.4 +/- 1.34 participated in this study. Forty one of the students [46.1%] were male and 48 [53.9%] female. Overall, 86.1% of them had positive views about the goals of the program; also, 83.5%, 81.2% and 81.9% of them reported a positive viewpoint about the contents, the applicability and development of specific skills, and meeting their expectations, respectively. The students' most frequent motivation was [learning how to research systematically] [73%]. The majority of the students reported this program to be moderately to highly effective in increasing their knowledge in the provided courses. Conclusion: The students had a positive view about almost all of the aspects of the MD/MPH program; this may be indicative of the program being successful in delivering the goals, increasing the students' knowledge and skills, and meeting their expectations to date. Students' enthusiasm for the educational program may lead to their motivation for better learning and thus in the program's success.

## Students, Nursing

### **Impact of clinical supervision on field training of nursing students at Urmia University of Medical Sciences**

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**Journal of Advances in Medical Education and Professionalism** 2016; 4 (2): 88-92

**Keywords:** Education, Nursing; Organization and Administration; Students; Education

**Abstract:** Introduction: Obtaining clinical competency in clinical education is one of the problems in nursing and use of the new methods of clinical training is very important. Clinical supervision is one of the methods used as a mechanism to promote knowledge and skill for promoting professional performance in nursing students. This study is carried out to determine the impact of clinical supervision on field training of nursing students at Urmia University of Medical Sciences. Methods: In the present experimental study, 32 nursing students were enrolled in the study based on census and randomly assigned into two groups of experimental and control by block randomization. Clinical supervision was used in the experimental group and the control group received routine clinical trainings in the field. The students' clinical skills were assessed using a researcher-made checklist, the validity of which was confirmed through content validity method by 13 faculty members and its reliability was approved by test-retest method on 20 nursing students in the form of a pilot study and through Cronbach's alpha [87%]. Data were analyzed using SPSS, version. 14. Results: There was a significant difference between the experimental and control groups in clinical skills such as recognition and administration of medication, team participation, patients and their relatives' education, considering the safety, infection prevention and nursing process [ $p < 0.005$ ]. Conclusion: The study demonstrated that in clinical supervision process, students have a better communication and cooperation with their instructor and with each other and their confidence and understanding and the amount of learning in practical skills was enhanced more than routine clinical training. The implementation of this clinical training method for students of nursing and other fields of medical sciences is recommendable.

## Substance Withdrawal Syndrome

### **Attenuation of withdrawal signs, blood cortisol, and glucose level with various dosage regimens of morphine after precipitated withdrawal syndrome in mice**

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (1): 53-58

**Keywords:** Hydrocortisone-blood; Blood Glucose; Morphine; Mice; Substance-Related Disorders; Methadone; Naloxone

**Abstract:** Morphine withdrawal usually results in unsuccessful outcomes. Despite partial benefits from alternative substances such as methadone, its use may not lead to the desired result due to the lack of mental tranquility during the withdrawal period. In this study, by means of an animal model, morphine itself was used to manage morphine dependence. Forty mice were divided into 5 groups, in which 4 groups became dependent by increasing daily doses of morphine for 7 days [15-45 mg/kg]. Afterwards, the animals received morphine for 14 days by either of the following regimens: - Once daily 45 mg/kg [positive controls]. - Increasing the interval [each time 6 hours longer than the previous interval]. - Irregular interval in every 36, 12 and 24 hours until the 21<sup>st</sup> day. - 12, 24, 36 hours decreasing doses [each time 2.5 mg/kg less than the former dosage]. Negative controls received saline solution only. On day 22, total withdrawal index [TWI] was determined by injecting 3 mg/kg of naloxone. Thereafter, blood samples were taken for the measurement of cortisol and glucose levels. TWI significantly decreased in all test groups in comparison with the positive control animals [ $P < 0.001$ ]. Cortisol levels significantly decreased when either the dosage or the administration frequencies were decreased on a regular and gradual basis [ $P < 0.005$ ]. Blood glucose levels significantly decreased in animals that received decreasing doses of morphine [ $P < 0.005$ ]. This study suggests that no other measures may be required in clinical practice except for changing the dosage regimen of morphine for the cessation of self-administration.

## Substance-Related Disorders

### Substance use in youth

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**IJEHSR-International Journal of Endorsing Health Science Research** 2016; 4 (1): 20-26

**Keywords:** Stress, Psychological; Life Change Events; Family; Awareness; Emotions; Adolescent

**Abstract:** Youth is the time period of vast exploration and curiosity. Young people begin to explore the world around. They acquire pleasure and satisfaction by carrying out risky behaviors to satisfy their impulse. Substance use is one such action that young people get attraction from certain individual, familial, social and environmental variables. Young people's past as well as present stressful experience and maladaptive coping style create strong affinity. Diverse researches have favored that pubertal transition, parenting style, family cohesiveness, maternal use, modeling, conditioning, and socialization reflect on youth's upbringing. It is evident that the substance use is one of the cognitive and behavioral outcome. There is a need to construct a most supportive zone around youth that enables them to broaden their horizon of emotional intelligence. As a health care professional, knowledge about all the levels of prevention can aid communities to have an addiction free environment. Individual counselling, family therapy, national and international awareness programs would help in eradicating substance use. Collaborative work of Governmental and Non-Governmental Organizations [NGO's] would motivate youth to acquire a substance free lifestyle.

## Sulfonamides

### pharmacology

#### Effect of Tamsulosin on stent related symptoms; a prospective study

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**Professional Medical Journal-Quarterly [The]** 2016; 23 (1): 114-118

**Keywords:** Prospective Studies; Ureteral Obstruction; Lower Urinary Tract Symptoms; Stents

**Abstract:** Introduction: Cystoscopic intraluminal placement of ureteral stents has become a routine practice in urology. Ureteral stents preserve urine flow from the kidney to the bladder in cases of ureteral obstruction [intrinsic or extrinsic]. In patients with obvious ureteral obstruction, the placement of a ureteral stent will restart urine transport and protect the kidney from possible risks. Ureteral stents are troublesome in some patients and causes LUTS. Study Design: Prospective randomized controlled trial. Setting: Urology Department, Sheikh Zayed Hospital Lahore. Period: Six month started from August 2015 to December 2015. Material and Methods: 100 patients who were randomly divided into two equal groups. The patients were between 18 to 50 years of age of both gender undergo retrograde double-J ureteral stent placement. Before the double-J stent will be applied, all patients completed an International Prostate Symptom Score [IPSS] questionnaire for evaluation of lower urinary tract symptoms. Patients were divided in two groups on the basis of lottery method tamsulosin group [1] and placebo group [2]. Tamsulosin group patients was given tamsulosin post operatively and placebo group was given a placebo postoperatively. Results: There were total 100 patients who were enrolled in this study with a mean age of 42.63 +/- 6.24. There were 75[75%] were male while 25[25%] were female. The mean IPSS score at presentation was 2.47 +/- 1.43 and post treatment was 5.20 +/- 1.65. There was significant difference in IPSS score in control group with mean. 5.28 +/- 1.69 versus study as mean 2.22 +/- 1.05 group, p-value= 0.010. Conclusion: There is difference in lowering of IPSS score in the patients who are given tamsulosin versus those who were retained on placebo

## Surrogate Mothers

#### Development and validation of attitude toward gestational surrogacy scale in iranian infertile couples

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**IJFS-International Journal of Fertility and Sterility** 2016; 10 (1): 113-119

**Keywords:** Cross-Sectional Studies; Attitude; Infertility; Reproducibility of Results; Family Characteristics

**Abstract:** Background: Surrogacy is one of the most challenging infertility treatments engaging ethical, psychological and social issues. Attitudes survey plays an important role to disclose variant aspects of surrogacy, to help meeting legislative gaps and ambiguities, and to convert controversial dimensions surrounding surrogacy to a normative concept that eliminates stigma. The aim of this study is to develop a comprehensive scale for gestational surrogacy attitudes. Materials and Methods: Development process of gestational surrogacy attitudes scale [GSAS] performed based on a descriptive cross-sectional study and included a rich data pool gathered from literature reviews, a qualitative pilot study on 15 infertile couples [n=30], use of expert advisory panel [EAP] consisting of 20 members, as well as use of content validity through qualitative and quantitative study by the means of content validity ratio [CVR] and content validity index [CVI]. Also internal consistence using Cronbach's alpha and test-retest reliability using intraclass correlation coefficient [ICC] were evaluated. Application of GSAS was tested in a cross-sectional study that was conducted on 200 infertile couples [n=400] at Royan Institute, Tehran, Iran, during 2014. Results: Final version of GSAS had 30 items within five subscales including [acceptance of surrogacy], [Surrogacy and public attitudes], [Child born through surrogacy] [Surrogate mother], and "Intentional attitude and surrogacy future attempt". Content validity was represented with values of CVR=0.73 and CVI =0.98. Cronbach's alpha value was 0.91 for the overall scale, while ICC value due to test-retest responses was 0.89. Conclusion: Acceptable level of competency and capability of GSAS is significantly indicated; therefore, it seems to be an appropriate tool for the evaluation of gestational surrogacy attitudes in Iranian infertile couples.

## Sympathetic Nervous System

### Inclusion of height and limb length when interpreting sympathetic skin response

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (1): 48-52

**Keywords:** Body Height; Extremities; Galvanic Skin Response; Skin

**Abstract:** It is more than a decade since scientists are making use of sympathetic skin response [SSR] as a clinical and research method to evaluate sympathetic nervous system. A major portion of the efferent pathway of this response is composed of non-myelinated nerves. Thus, the latency of the response may be significantly different in normal individuals with different height and limb lengths. This study was designed to investigate the effect of these parameters on the SSR results. We measured the height and limb length of 65 normal individuals with different heights [divided into 3 groups of height  $\leq 150$  cm, 150-170 cm, and  $\geq 170$  cm]. The participants had neither peripheral nor central neuropathy. They also had none of the exclusion criteria. Then, they underwent SSR testing of both palms and soles. The correlation between the height and limb length in relation to SSR parameters [latency and amplitude] was analyzed statistically by Pearson's correlation. No significant correlation was detected between the height and limb length and the SSR amplitude. However, the results showed significant correlation between SSR latency recorded from all four sites [both palms and soles] and the height of participants. Furthermore, there was a significant correlation between SSR latency recorded from any limb and the length of that limb. Regarding the significant effect of the height and limb length on the SSR latency, both the height and limb length should be considered when interpreting the results of SSR.

## Temporomandibular Joint Dysfunction Syndrome

### Temporomandibular joint pain syndrome; effect of occlusal splint therapy

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**Professional Medical Journal-Quarterly [The]** 2016; 23 (1): 81-84

**Keywords:** Occlusal Splints; Pain

**Abstract:** Introduction: The temporomandibular joint disorders TMD and their management is a problem in dentistry and complaints associated to this problem are pain in the area of joint and associated muscles along with limitations and clicking sounds during mandibular opening and closing. One of the popular method of treatment is splint therapy. Study design: It was longitudinal intervention study. Objectives: The purpose of this study is to assess about oral splint as an effective treatment for TMD patients. Period: Total study time for this study was about two years. Setting: Study was carried out in prosthodontics department of Sharif medical and dental college Lahore. Methodology: In the present study 40 patients were included the study. All patients were suffering from some psycho-social issue. Their maximum mouth opening MMO was measured and all of them were treated with occlusal splints. Results: There was significant



improvement in MMO and reduction in pain. 75% patients responded to treatment very well, however, 22.5% responded moderately and 2.5% patients did not respond to treatment. Conclusion: Splint therapy is an effective way to treat TMD. Splint therapy along with some psychological rehabilitation of patients which may produce better results.

## Testosterone

### **The effects of testosterone on oxidative stress markers in mice with spinal cord injuries**

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**IJFS-International Journal of Fertility and Sterility** 2016; 10 (1): 87-93

**Keywords:** Oxidative Stress; Spinal Cord Injuries; Infertility; Mice; Reactive Oxygen Species

**Abstract:** Background: Spinal cord injury [SCI] causes infertility in male patients through erectile dysfunction, ejaculatory dysfunction, semen and hormone abnormalities. Oxidative stress [OS] is involved in poor semen quality and subsequent infertility in males with SCI. The aim of this study is to examine the effects of SCI on the level of testosterone hormone. Materials and Methods: In this experimental study, we evaluated the effects of exogenous testosterone on the activity of the antioxidant enzymes superoxide dismutase [SOD] and glutathione peroxidase [GPx] as well as the levels of malondialdehyde [MDA] and protein carbonylation [PCO], as markers of OS, in 10 groups of SCI mice. Total antioxidant capacity [TAC] was determined using the 2, 2'-azino-bis-[3-ethylbenzothiazoline-6-sulfonic acid] [ABTS] radical cation assay. Results: Exogenous testosterone administration in mice with SCI significantly reduced SOD and GPx enzyme activities and MDA level. There was no significant decrease in PCO content. In addition, TAC remarkably increased in the sham and SCI groups not treated with testosterone but remained unchanged in all other experimental groups. Exogenous testosterone also reduced serum testosterone levels in all groups except the positive control group. Conclusion: Our cumulative data indicated that SCI could cause sterility by disturbing the plasmatic testosterone balance. The normal level of endogenous testosterone was not completely restored by exogenous testosterone administration.

## Tobacco

### **Moving away from the comfort zone of tobacco control policies to the highest level of implementation**

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**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (3): 161-162

**Keywords:** Health Plan Implementation; Social Control Policies; Risk Factors

## Tooth Movement

### **Effects of neodymium-doped yttrium aluminium garnet [Nd:YAG] laser irradiation on bone metabolism during tooth movement**

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**Journal of Lasers in Medical Sciences** 2016; 7 (1): 40-44

**Keywords:** Rats, Wistar; Lasers, Solid-State; Low-Level Light Therapy

**Abstract:** Introduction: The aim of this study is to evaluate the effects of low-level neodymium-doped yttrium aluminium garnet [Nd:YAG] laser irradiation on orthodontic tooth movement and histological examination. Methods: Eleven male Wistar rats [aged 10 weeks] were included. To produce experimental tooth movement in rats, 10 g force was applied to maxillary first molars with nickel titanium closed coil springs. Right molars were irradiated with Nd:YAG laser on days 0, 1, 2, 3, 7, 10, 14, 17, 21 and 24, while un-irradiated left molars were used as control. Distance between mesial side of second molar and distal side of first molar was measured on uCT image during tooth movement and the rats were sacrificed 4 weeks after the initiation of tooth movement. Results: The amount of tooth movement was significantly greater in the irradiation group [0.20 +/- 0.06] than in the control group [0.14 +/- 0.03] during the first week [P<0.05]. However, no statistically significant difference was found afterwards. There was a

tendency of higher tartrate-resistant acid phosphatase [TRAP]-positive nuclei count in the pressure zones of the laser irradiation group, but it was not statistically significant. In immuno-histological examination, expressions of alkaline phosphatase [ALP] and receptor activator of nuclear factor kappa-B ligand [RANKL] were higher at the pressure site of the laser irradiation group than the control group, whereas there was no difference in osteoprotegerin [OPG] expression. Conclusion: The results suggest that low-level Nd:YAG laser may stimulate osteoclast and osteoblast activation and accelerate bone metabolism during tooth movement.

## Tourette Syndrome

### etiology

#### **Tourette's Syndrome; Is there a causal link to Violence?**

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**IJEHSR-International Journal of Endorsing Health Science Research** 2016; 4 (1): 7-14

**Keywords:** Violence; Tics; Attention Deficit Disorder with Hyperactivity

**Abstract:** A narrative review of current literature was carried out to see whether Tourette's syndrome is a cause of violence among patients. Two internet based resources were searched and seventeen eligible original studies were included in the review. Majority of the studies demonstrated that Tourette's syndrome on its own does not cause violence but instead co-morbid conditions like Attention deficit hyperactivity disorder [ADHD] increased the likelihood of violence in patients directed towards self and others.

## Tracheal Stenosis

#### **Palliation of postintubation tracheal stenosis using insulation-tipped diathermic knife 2: a case report**

Yoon, Seon Bin; Park, Yong Won; Cheon, Mi Ju; Koh, Young Min; Park, Sanghoon; Kim, Se Joong; Lee, Seung Hyeun  
KEPCO Medical Center - Department of Internal Medicine

**Medical Principles and Practice** 2016; 25 (1): 90-92

**Keywords:** Intubation, Intratracheal; Diathermy; Bronchoscopy; Tomography, X-Ray Computed

**Abstract:** Objective: To report the first case of using the insulation-tipped diathermic knife 2 [IT knife-2] for the treatment of postintubation tracheal stenosis. Clinical Presentation and Intervention: A 71-year-old female patient with a history of endotracheal intubation 3 years earlier presented with throat discomfort, gross wheezing and dyspnea. Chest imaging and bronchoscopy demonstrated a strand-like tracheal stenosis in the upper trachea. The IT knife-2 was used to treat the patient and the lesion was palliated without complication. Conclusion: This case was successfully treated with the IT knife-2 and thus implies a potential usefulness of the IT knife-2 as a new modality for bronchoscopic intervention.

## Trachoma

### therapy

#### **Chronic trachoma: comparison of azithromycin versus topical tetracycline in rural sindh population**

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**PAFMJ-Pakistan Armed Forces Medical Journal** 2016; 66 (2): 225-229

**Keywords:** Azithromycin-therapeutic uses; Tetracycline-therapeutic uses; Rural Population

**Abstract:** Objective: To compare the efficacy of oral azithromycin with topical tetracycline for treating chronic trachoma in rural Sindh population of Pakistan. Study Design: Randomized Control Trial [RCT]. Place and Duration of Study: CMH Pano Aqil from October 2010 to September 2013. Material and Methods: A total of 214 individuals with

active trachoma in at least one eye were recruited in the study and randomly assigned to either treatment group. Patients visited after 10 weeks. The outcome was 'resolved disease'. The data was analyzed using SPSS 20. Results: Patients in azithromycin group were significantly more likely to have resolved disease as compared to tetracycline group at 10 weeks of follow up [86% vs 71%; 95% confidence interval CI, 0.28-0.87;  $p=0.015$ ]. Differences within the age groups were not significant [children,  $p=0.072$ ; elderly,  $p=0.091$ ]. Conclusion: Single dose oral azithromycin was significantly more likely to achieve better outcome in chronic trachoma in rural population where compliance had been an issue.

## Transforming Growth Factor beta

### **Hsa-mir-590-5p interaction with smad3 transcript supports its regulatory Effect on The TGFbeta signaling pathway**

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**Cell Journal [Yakhteh]** 2016; 18 (1): 7-12

**Keywords:** MicroRNAs; Smad Proteins; Cell Proliferation; Reverse Transcriptase Polymerase Chain Reaction

**Abstract:** Objective: SMAD proteins are the core players of the transforming growth factor-beta [TGFbeta] signaling pathway, a pathway which is involved in cell proliferation, differentiation and migration. On the other hand, hsa-miRNA-590-5p [miR-590-5p] is known to have a negative regulatory effect on TGFbeta signaling pathway receptors. Since, RNAhybrid analysis suggested SMAD3 as a bona fide target gene for miR-590, we intended to investigate the effect of miR-590-5p on SMAD3 transcription. Materials and Methods: In this experimental study, miR-590-5p was overexpressed in different cell lines and its increased expression was detected through quantitative reverse transcription-polymerase chain reaction [RT-qPCR]. Western blot analysis was then used to investigate the effect of miR-590-5p overexpression on SMAD3 protein level. Next, the direct interaction of miR-590-5p with the 3'-UTR sequence of SMAD3 transcript was investigated using the dual luciferase assay. Finally, flow cytometry was used to investigate the effect of miR-590-5p overexpression on cell cycle progression in HeLa and SW480 cell lines. Results: miR-590-5p was overexpressed in the SW480 cell line and its overexpression resulted in significant reduction of the SMAD3 protein level. Consistently, direct interaction of miR-590-5p with 3'-UTR sequence of SMAD3 was detected. Finally, miR-590-5p overexpression did not show a significant effect on cell cycle progression of HeLa and SW480 cell lines. Conclusion: Consistent with previous reports about the negative regulatory effect of miR-590 on TGFbeta receptors, our data suggest that miR-590-5p also attenuates the TGFbeta signaling pathway through down-regulation of SMAD3.

## Transplantation

### **The effect of one session low level laser therapy of extracted follicular units on the outcome of hair transplantation**

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Medical Laser Research Center, ACECR

**Journal of Lasers in Medical Sciences** 2016; 7 (1): 26-29

**Keywords:** Hair Follicle; Alopecia; Low-Level Light Therapy; Treatment Outcome

**Abstract:** Introduction: Photobiostimulation with low level laser [LLL] has been used in medicine for a long time and its effects have been shown in many diseases. Some studies have evaluated the effect of LLL on androgenic alopecia. One of the most important limitations of the use of LLL in the treatment of alopecia is the requirement for multiple sessions, which is hardly accepted by patients. This study was conducted to evaluate the effect of the irradiation of extracted follicular hair units by LLL on the outcome of hair transplantation. Methods: We enrolled 10 patients with androgenic alopecia and after screening tests for infections and other diseases, we extracted hair follicular units. The hair units were divided in two groups. One group was irradiated by LLL 20 minutes before transplantation [660 nm, 80 Hz, 100 mW] and the other one was used as control. The containing plates were labeled as A and B and sent to the operation room. The surgeon was unaware of the therapy assigned to the plates and transplanted them randomly on the right or left side of the head. One hundred follicular units on each sides of the scalp were transplanted symmetrically. The follicles on both sides were evaluated at 3 and 6 months of transplantation for hair growth rate by another physician, blinded to the treatment assigned to each side. Results: Ten patient with androgenic alopecia and mean [SD] age of 31.5 [6.6] years [range 25-45 years] completed the study. All patients had 100% hair growth at 3 and 6 months follow-up except one who had hair growth of 20% at three months of transplantation, which changed to 100% at sixth months. There was no significant difference between the groups regarding hair growth [ $P>0.8$ ]. Conclusion: One session of LLL irradiation has no significant effect on the outcome of transplanted hair follicles. Studies with larger sample size are needed to draw a definite conclusion.

## Travel Medicine

### **Knowledge, attitudes, and practices regarding travel health among Muscat International Airport travelers in Oman: Identifying the gaps and addressing the challenges**

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Ministry of health - Directorate general of disease surveillance and control

**Journal of Epidemiology and Global Health** 2016; 6 (2): 67-75

**Keywords:** Travel; Health Knowledge, Attitudes, Practice; Attitude; Cross-Sectional Studies; Surveys and Questionnaires

**Abstract:** Although the majority of travel-associated communicable diseases can be prevented, the public health burden of these diseases remains significant. Relatively little is known about how travelers know and perceive the health risks associated with the travel and how they utilize preventive measures before and while Travel medicine-traveling abroad. This study was conducted to determine the level of the knowledge, attitudes, and practices [KAP] of Muscat International Airport travelers about travel health in order to assess the knowledge gap and the need for travel health services in Oman. A cross-sectional study was conducted over a period of 1 week using a self-administered questionnaire. The overall level of knowledge about vaccine-preventable diseases, food safety, and preventive measures against insect bites of the participants was inadequate. The practice concerning preventive travel health measures, such as the use of specific immunizations and antimalarial prophylaxis, was very limited, and influenced by some personal and travel-related factors. The inadequate level of travelers' knowledge and poor utilization of travel medicine services highlights the need for the provisions of specialized travel medicine services at the national level and to develop educational materials promoting the importance of pre-travel health advice.

## Trigeminal Neuralgia

### therapy

### **Trigeminal nerve compression technique for the treatment of trigeminal neuralgia: study of 80 cases in 10 years**

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**JPMI-Journal of Postgraduate Medical Institute** 2016; 30 (1): 89-91

**Keywords:** Trigeminal Nerve; Nerve Compression Syndromes

**Abstract:** Objective: To determine the outcome of trigeminal nerve compression technique [TGNC] treatment for the idiopathic trigeminal neuralgia without decompressing the nerve compressed by the offending vessel. Methodology: This case series study was conducted in Hayatabad medical complex, Lady ready hospital and Abaseen hospital, Peshawar from June 2004 to June 2014. Consent from the ethical committee and patients were taken. All patients of idiopathic trigeminal neuralgia [TGN] were included. Those TGN cases having mass lesion were excluded. All information were put in proforma. Results were analyzed by SPSS version 20 and presented in the form of tables. Results: Total number of patients included in the study were 80 in which males were 45 [56.25%] and females were 35 [43.75%]. Male to female ratio of 1.3:1 The ages ranged from 30 to 70 years and mean age was 50 ±20. Detail history and clinical examination were performed. Routine investigations of complete blood count, HBSAg, HCV and brain MRI were done in all cases. Follow up ranged from 1 to 10 years. Outcome was 77[96.2%] patients were completely pain free while 3[3.8%] of patients developed recurrence. One patient [1.25%] developed CSF rhinorrhea, otorrhea, facial nerve paresis and deafness each. Conclusion: The compression of TN by vascular loop was not found as a cause of TGN. TGNC Technique for TGN is less invasive, safe and effective.

## Tuberculosis

### epidemiology

#### **Epidemiology of tuberculosis and evaluation of treatment outcomes in the national tuberculosis control programme, River Nile state, Sudan, 2011-2013**

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**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (2): 95-102

**Keywords:** Tuberculosis-therapy; Treatment Outcome; World Health Organization; Tuberculosis, Pulmonary

**Abstract:** Tuberculosis is a major health problem in Sudan, a country that carries 11-15% of the tuberculosis burden in the Eastern Mediterranean Region. This study aimed to describe the epidemiology of tuberculosis in River Nile State and to compare treatment outcomes with WHO recommended indicators. A descriptive study was conducted on data collected from records of 1221 patients registered at tuberculosis management units over the 3 years 2011-2013. The mean age of cases was 37.7 [SD 21.5] years and 65.9% were males; 76.3% were pulmonary tuberculosis and 36.9% were sputum smear-positive cases. Average values for all outcome indicators were suboptimal, notably rates of case notification [30.8 per 100 000], case detection [10.3%], treatment success [79.6%], treatment failure [3.0%], default [8.1%] and death [8.0%]. Of the 264 patients tested for HIV, 3.8% were positive. Outcome indicators for the national tuberculosis control programme are lagging behind the required targets

### therapy

#### **Evaluation of factors associated with failure of tuberculosis treatment under DOTS in northern Islamic Republic of Iran**

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**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (2): 87-94

**Keywords:** Treatment Failure; Risk Factors; Surveys and Questionnaires; Retrospective Studies; Cohort Studies; Treatment Outcome

**Abstract:** Tuberculosis treatment failure remains a major health problem in many parts of the Islamic Republic of Iran. This study was conducted to identify the risk factors associated with failure of tuberculosis treatment under the DOTS strategy in two cities of Golestan province. A retrospective cohort study in 2012-2013 was conducted on 167 smear-positive tuberculosis patients monitored under DOTS. Demographic, clinical and treatment outcome factors and social determinants of health were recorded for each patient. Multivariate regression analysis found that the strongest predictors of tuberculosis treatment failure were: being infected with other diseases [OR 9.35; 95% CI: 3.01-29.1], male sex [OR 5.03; 95% CI: 1.58-16.1], Turkoman ethnicity [OR 11.0; 95% CI: 2.00-60.1], family history of tuberculosis [OR: 0.21; 95% CI: 0.05-0.96] and household size [OR 1.21; 95% CI: 0.99-1.48]. Recommendations include better follow-up for patients with other diseases and facilitating access to treatment, especially for Turkoman patients.

## Tuberculosis, Multidrug-Resistant

#### **Antimicrobial resistance and the growing threat of drug resistant tuberculosis**

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**Journal of Epidemiology and Global Health** 2016; 6 (2): 45-47

**Keywords:** Drug Resistance, Microbial; Tuberculosis

## diagnosis

### Multidrug-resistant disseminated tuberculosis in a 9-month-old infant

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**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (1): 59-61

**Keywords:** Tuberculosis; Mycobacterium tuberculosis; Antitubercular Agents; Mass Chest X-Ray

## epidemiology

### Status of multidrug resistant tuberculosis [MDR-TB] among the Sahariya tribe of North Central India

Prakash, Ravi; Kumar, Dilip; Gupta, Vinod K.; Jain, Sanjay; Chauhan, Devendra S.; Tiwari, Pramod K.; Katoch, Vishwa M  
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**Journal of Infection and Public Health** 2016; 9 (3): 289-297

**Keywords:** Tuberculosis; Prevalence; Mycobacterium tuberculosis

**Abstract:** Background: The incidence/prevalence of tuberculosis [TB] is reported to be high in the Sahariya tribe of North Central India. The outbreaks of different drug-resistant isolates of Mycobacterium tuberculosis emphasized the need for continuous monitoring of resistance to anti-tuberculosis drugs. This study aimed to assess the profile of multidrug resistant TB among the Sahariya tribe and their non-tribal neighbors for first line drugs through field-based investigations. Methodology: A total of 274 sputum positive pulmonary TB individuals were enrolled and studied for their drug susceptibility profile by the proportion method. Results: A total of 21 cases from Sahariya and 6 from non-tribes were identified with MDR-TB. Thus Sahariya tribe showed a 1.95-fold increased risk of developing drug resistance than non-tribes. Significant differences were observed for developing drug sensitivity between Sahariya males and females when analyzed for resistance developed to any drug and overall drug resistance vs. sensitive isolates, respectively. A 4.46-fold risk was found for MDR-TB among the smokers of Sahariya tribe, whereas, the non-tribes did not show any significant association. Conclusion: The drug susceptibility profile developed in the present study indicates that drug-resistant tuberculosis is emerging as a serious public health concern in Sahariya tribe. Urgent and effective control measures and better management policies are needed for the prevention of MDR-TB in the tribe.

## Tuberculosis, Pulmonary

### Time to sputum smear conversion in smear-positive pulmonary tuberculosis patients and factors for delayed conversion

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**IJMS-Iranian Journal of Medical Sciences** 2016; 41 (1): 44-47

**Keywords:** Sputum; Lung-radiography; Bacterial Infections

**Abstract:** Pulmonary tuberculosis is a common infection worldwide. In the eastern part of Iran, fluctuations in tuberculosis prevalence are seen due to the migration of people from Afghanistan. The aim of this study was to evaluate the time of bacteriologic sputum conversion after treatment and affecting factors in those whose smear does not become negative. This study was carried out on 85 smear-positive pulmonary tuberculosis patients with the mean age of 65.6 +/- 16.7 years. There were 38 male patients [44.7%], 47 urban residents [55.3%], and only 6 patients [7.1%] from Afghanistan. The mean time of sputum conversion after starting treatment was 1.99 +/- 1.06 months. The mean time of sputum conversion was significantly higher in males [P=0.046], increased bacilli density in the primary sputum sample [P<0.0001, R=0.507], and pre-existing medical illness [P=0.001]. In this study, it was revealed that pre-existing illness, bacilli density in initial smear, and severe involvement of the lung on radiography, could be associated with delay in sputum smear conversion.

## **Tuberculous patients; diagnostic significance of fasting blood glucose [AFB]**

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**Professional Medical Journal-Quarterly [The]** 2016; 23 (1): 45-49

**Keywords:** Diabetes Mellitus; Blood Glucose; Fasting; Prospective Studies; Sputum

**Abstract:** Abstract: The objective of present study was to screen out the diabetes mellitus by fasting blood glucose [FBG] in patients with pulmonary tuberculosis. Background: Diabetes mellitus and Tuberculosis has strong co-relation and complicates each other. Diabetes increases the risk of infections including tuberculosis particularly pulmonary TB, Therefore making antituberculous drugs ineffective. Similarly M. tuberculosis infection predisposes to diabetes mellitus and complicates it further. Patients simultaneously having, both diabetes mellitus and tuberculosis, the chances of multiple systems involvement becomes high. The delayed or ineffective response to anti tuberculous chemotherapy raises suspicion of underlying diabetes mellitus. There for such patients should be screen out by fasting blood glucose [FBG] levels so as to treat the treat the diabetes as well. Objectives: The objective of this study was to screen out diabetes in pulmonary TB patients by fasting blood glucose level [FBG] especially where the treatment response of. anti-tuberculous drug is delayed or poor. Study Design: This was prospective observational study. Place and Duration of Study: This study was conducted at DHQ-teaching hospital Mirpur Azad Kashmir from February 2013 to December 2014 .This included both in and outdoor patients. Inclusion criteria: 1. Age range of tuberculous patients between 20-40 years. 2. Pulmonary tuberculous patients. Exclusion criteria: 1. Pulmonary TB patients with co-existent diabetes mellitus. 2. TB patients with renal failure, autoimmune diseases like rheumatoid arthritis, SLE, immunosuppressant drugs and steroid were excluded. Material and Methods: Ninety-five diagnosed patients of pulmonary TB were selected. The questionnaire form was designed according to objective of study. This Included with patients having pulmonary TB with but still not screened out for diabetes. The questionnaire contained history, general physical and systemic examination, especially respiratory system. Risk factors like family history of diabetes and TB were evaluated. The socio-economic status of patients was carefully assessed. Routine investigations like complete blood count, ESR, fasting and random blood glucose were done. Three morning sputum specimens and fasting blood glucose [FBG] were main tools of diagnosis of TB. The data thus obtained, was subjected to SPSS version-20 for statistical analysis. Results: A total of 95 patients with pulmonary tuberculosis were selected including in and outdoor patients. Out of them, 65 patients were males, and 30 were females. Age group mainly ranging between 20-40 of years. Screening of diabetes in 95 tuberculous patients was done by fasting blood glucose. Seventeen patients [17], twelve [12] male and five [05] female were screened out to be diabetic. Conclusion: Screening by fasting blood glucose is an effective tool in diagnosis of diabetes mellitus in tuberculous patients

## **diagnosis**

### **Factors affecting sputum smear conversion time in newly diagnosed pulmonary tuberculosis patients**

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**PJMR-Pakistan Journal of Medical Research** 2016; 55 (1): 3-6

**Keywords:** Sputum; Tuberculosis, Pulmonary-therapy; Cross-Sectional Studies

**Abstract:** Background: Patients having tuberculosis are registered in the TB DOTS program for their treatment. During the treatment sputum samples are sent periodically to the laboratory to check treatment efficacy. Usually after two months of treatment sputum smear becomes negative but presence of multiple cavities in the lung, bacillary load, diabetes mellitus and tobacco smoking, slows the sputum smear conversion time. Objectives: To determine the factors affecting sputum smear conversion time in newly diagnosed pulmonary tuberculosis patients. Study design, settings and duration: This cross sectional, analytical study was done by Pakistan Medical Research Council, TB Research Centre in collaboration with Institute of TB and Chest Medicine King Edward Medical University/Mayo Hospital, Lahore from April 2013 to March, 2014. Patients and Methods: All newly diagnosed pulmonary tuberculosis patients who were registered and given treatment by the DOTS program were included in the study. All patients underwent sputum smear microscopy along with Complete Blood Count and ESR at the time of enrollment. The patients were followed for next 6 months while on treatment. Sputum samples were tested at 2[nd] and 6[th] month to check the sputum conversion rate and indirectly to see the efficacy/compliance to treatment. Results: A total of 400 patients were enrolled with slightly more males [52%] as compared to females [48%]. Smear became negative within two months of starting treatment in 85.7% patients while in 14.2% it remained positive at 2[nd] and 6[th] months of therapy. There were more females [10.7%] whose sputum smear did not became negative as compared to males [3.5%]. Predominant factors affecting sputum smear conversion were low resistance, raised initial bacillary load, decreased hemoglobin level, and long duration of symptoms at the time of diagnosis. Conclusion: Factors like low resistance, high initial bacillary load and decreased hemoglobin levels affect the sputum smear conversion and should be addressed while assessing efficacy of anti-tuberculosis treatment.

## Urinary Bladder Calculi

### therapy

#### **Outpatient transurethral cystolithotripsy of large bladder stones by holmium laser**

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**Journal of Lasers in Medical Sciences** 2016; 7 (1): 12-15

**Keywords:** Lasers, Solid-State; Prospective Studies; Lithotripsy, Laser; Holmium

**Abstract:** Introduction: To assessment of the efficacy and safety of transurethral Cystolithotripsy of large bladder stones by holmium laser in the outpatient setting. Methods: In a prospective study 48 consecutive adult patients with large bladder stones, were enrolled for transurethral Cystolithotripsy. Patients older than 18 years, with bladder stones larger than 2 cm were enrolled. Urethral stricture, active urinary infection, and any anesthetic contraindications for operation, were the exclusion criteria. Demographic characteristics of patients, outcomes and complications related to operation and post operation period, were recorded. Results: Patients mean age was 46 +/- 7.3 years. Male to female ratio was 45/3. Mean body mass index of patients was 28.5 +/- 3.5. Mean stone size was 3.7 +/- 1.6 cm. Mean operation time was 43.5 +/- 15.5 minutes. Nearly complete stone clearance [98.5%] was achieved in all patients. Mean hospital stay was 6.5. +/- 1.3 hours. No major complications were seen. Mean visual analog pain score [VAS] was 4.2 +/- 2.1 and. 1.4 +/- 0.6, during and 1 hour after operation, respectively. During follow up of 22.4 +/- 12.5 months, recurrence of bladder stone was not seen. No case of urethral stricture was detected. Conclusion: Transurethral holmium laser lithotripsy is an effective and safe alternative in selected patients with large bladder stones. This procedure can be easily performed in the outpatient setting.

## Urinary Tract Infections

#### **Prevalence of multidrug resistant uropathogenic bacteria in pediatric patients of a tertiary care hospital in eastern India**

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**Journal of Infection and Public Health** 2016; 9 (3): 308-314

**Keywords:** Anti-Bacterial Agents; Drug Resistance, Bacterial; Prevalence; Tertiary Care Centers; Urine; Aminoglycosides

**Abstract:** Today, because systemic infections such as urinary tract infection [UTI] affect even pediatric patients, antibiotic resistant bacteria have become a constant clinical challenge. In the present study, a total of 1054 urine samples were collected from pediatric patients over 18 months. From these samples, 510 isolates of pathogenic bacteria were collected using HiCrome UTI agar. Antibiotic sensitivity tests of isolates were performed using the Kirby-Bauer method. Two Gram-positive bacteria [Enterococcus faecalis and Staphylococcus aureus] and 7 Gram-negative bacteria [Citrobacter freundii, Enterobacter aerogenes, Escherichia coli, Klebsiella oxytoca, K. pneumoniae, Proteus vulgaris and Pseudomonas aeruginosa] were isolated. Antibiograms of isolated bacteria were ascertained using antibiotics of 4 classes: aminoglycosides, p-lactams, fluoroquinolones and 2 stand-alones [co-trimoxazole and nitrofurantoin]. Based on percent values of antibiotic resistance, isolated bacteria were [in decreasing order of number of isolated isolates]: E. coli [109] > S. aureus [65] > E. faecalis [82] > E. aerogenes [64] > C. freundii [41] > P. aeruginosa [32] > K. pneumoniae [45] > K. oxytoca [50] > P. vulgaris [22]. Surveillance results show that MDR isolates of 9 pathogenic bacteria were prevalent in the environment around the hospital. Thus, revisions to the antimicrobial stewardship program in this area of the country are required to increase clinician confidence in empiric therapy, which is often used for UTI cases



## etiology

### Urinary tract infections; etiological profile and antimicrobial susceptibility patterns of uropathogens

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**Professional Medical Journal-Quarterly [The]** 2016; 23 (1): 10-14

**Keywords:** Urinary Tract Infections-epidemiology; Escherichia coli; Microbial Sensitivity Tests

**Abstract:** Background: Urinary tract infections [UTIs] constitute important bacterial disease which contributes to significant morbidity world-wide. Empirical treatment in patients suffering from UTI depends upon the local knowledge of common microorganisms responsible for UTI in that geographical area as well as their antimicrobial susceptibility patterns. Objectives: To determine the frequency and antimicrobial susceptibility of uropathogens which are responsible for urinary tract infections. Study Design: Experimental study. Setting: Department of Pathology, Frontier Medical and Dental College and Mohi Ud Din Islamic Medical College. Period: January 2015 to June 2015. Material and methods: Total of 113 patients were included in the study. Urine samples were cultured on MacConkey's agar and Cysteine Lactose Electrolyte Deficient [CLED] agar. Micro-organisms were identified using standard tests and antimicrobial susceptibility was checked using modified Kirby Bauer method following Clinical and Laboratory Standards Institute [CLSI] guidelines. Results: The average age of patients was 32.19 +/- 16.47 years. Gram negative organisms accounted for majority of cases, about 89 [78.76%] cases. Escherichia coli was the most common micro-organism which was found in 50 [44.24%] cases followed by Staphylococcus aureus in 24 [21.24%], Enterobacter spp. in 19 [16.81%], Klebsiella spp. in 11 [9.73%] and Proteus spp. in 9 [7.96%] cases. E. coli was sensitive to imipenem and ciprofloxacin and was resistant to amoxicillin/clavulanic acid and gentamicin. Conclusion: Gram negative organisms are largely responsible for UTIs and E. coli being the most common etiological agent. E. coli is sensitive to commonly prescribed drugs for UTI like ciprofloxacin.

## Uterine Rupture

### Rupture of uterus [fundus]; spontaneous rupture of an unscarred uterus [fundus], at 35 weeks 01 day of gestation of a multigravida

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**Professional Medical Journal-Quarterly [The]** 2016; 23 (1): 119-122

**Keywords:** Uterine Retroversion; Obstetric Labor Complications; Rupture, Spontaneous; Pregnant Women; Gravidity

**Abstract:** Rupture of a gravid uterus is a surgical emergency. Predisposing factors include a scarred uterus. Spontaneous rupture of an unscarred uterus during pregnancy is a rare occurrence. We hereby present the case of a spontaneous complete uterine rupture at a gestational age of 35 weeks 01 day in a 25 years old patient. The case was managed at the Civil Hospital Bahawalpur. She had past history of one uterine curettage for endometrial polyp one year back. She presented with mild abdominal pains of sudden onset. After conservative management for 10 hours in hospital she suddenly developed severe abdominal pains with P/V bleeding. On ultrasound scan, uterine rupture was diagnosed and an emergency laparotomy was done. The ruptured amniotic sac with baby and placenta were found in the peritoneal cavity with rupture of the uterine funds. Spontaneous uterine fundus rupture usually occurs when there is an upper segment uterine scar. This case report shows that past history of curettage is a risk factor for the presence of uterine scar.

## Venous Thrombosis

### Deep venous thrombosis; mean platelet volume, D-Dimer and doppler sonography. patients of surgical wards of liaquat university hospital

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**Professional Medical Journal-Quarterly [The]** 2016; 23 (1): 20-24

**Keywords:** Mean Platelet Volume; Fibrin Fibrinogen Degradation Products; Ultrasonography, Doppler; Patients' Rooms; Case-Control Studies

**Abstract:** Objectives: To study mean platelet volume [MPV] in deep venous thrombosis [DVT] as evaluated by D-Dimer and Doppler sonography. Study Design: Case control study. Place and Duration: Department of Surgery, Liaquat University of Medical and Health Sciences Jamshoro/Hyderabad from May 2013 to April 2014. Subjects and Methods: A sample of 106 subjects; 50 controls and 53 diagnosed patients of DVT were studied. DVT patients were included according to inclusion and exclusion criteria and after results of Sonography and D-Dimer were available. The Blood samples were collected in bottles containing sodium citrate as anticoagulant. MPV was generated by Sysmex KX 21 hematology analyzer. Informed consent was sought from the volunteer subjects. The Data was analyzed using SPSS version 21.0. Statistically significance was defined at p-value of  $\leq 0.05$ . Results: Mean platelet volume was elevated in deep venous thrombosis patients which were confirmed by clinical examination, sonography and D-Dimer. MPV was elevated in cases;  $10.0 \pm 0.7$  fl compared to controls;  $9.55 \pm 0.63$  fl [ $p=0.001$ ]. D-Dimer was elevated in deep venous thrombosis patients [ $p=0.0001$ ]. Age, gender and platelet counts did not revealed any significant differences between cases and controls [ $p>0.05$ ]. Conclusion: The present study reports elevated MPV in patients suffering from deep venous thrombosis and it is concluded that MPV may be considered as a risk factor for DVT.

## Ventricular Dysfunction, Left

### Left atrium volume as a surrogate marker of left ventricular diastolic dysfunction

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**JPMI-Journal of Postgraduate Medical Institute** 2016; 30 (1): 84-88

**Keywords:** Heart Atria; Diastole; Echocardiography; Mitral Valve Insufficiency

**Abstract:** Objective: To determine correlation between left atrial volume and left ventricular diastolic dysfunction. Methodology: This was a single center observational study conducted at Lady Reading Hospital, Peshawar. Patients above 18 years of both genders, who were in sinus rhythm and having no significant systolic dysfunction or significant mitral insufficiency on echocardiography, were included in the study, using purposive non-probability sampling technique. A total 339 patients underwent transthoracic echocardiography from July 2013 to June 2014. Detailed cardiac echocardiography was performed to determine left atrial volume, ejection fraction, E and A velocities, deceleration time and e' velocity. Results: A total of 339 patients were studied. Male were 61.9%. Mean age of study population was  $58.42 \pm 10.48$  years. Baseline characteristics of patients having some degree of diastolic dysfunction were; mean age  $65.5 \pm 12.3$ , mean body mass index  $25.2 \pm 2.5$  kg/m<sup>2</sup>, mean ejection fraction  $55.1 \pm 7.5\%$ , hypertension 48.6%, diabetes mellitus 10.1% and left ventricular hypertrophy 38.6%. Echocardiographic findings in diastolic dysfunction patients were as follow: mean left atrial volume was  $65.3 \pm 10.1$  ml, E/A  $1.4 \pm 0.6$ , TDI e' was  $6.7 \pm 1.3$  m/sec and TDI E/e' was  $12.7 \pm 2.1$ . Increasing left atrial volume was well correlated with increasing severity of left ventricular diastolic dysfunction [ $r = +0.8$ , Spearman rank correlation]. Conclusion: Increase in left atrial volume is directly correlated with severity of diastolic dysfunction. Severity of diastolic dysfunction increases with increased left atrial volume.

## Vibrio cholerae

### Isolation frequency and susceptibility pattern of non-O1 and non-O139 Vibrio cholerae in a tertiary health care laboratory, 1999-2012

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**EMHJ-Eastern Mediterranean Health Journal** 2016; 22 (2): 142-147

**Keywords:** Vibrio cholerae non-O1-isolation and purification; Tertiary Healthcare; Tertiary Care Centers

**Abstract:** In the past decade the importance of non-O1 and non-O139 strains of Vibrio cholerae has been highlighted globally. This study aimed to evaluate the frequency and antimicrobial susceptibility profile of non-O1 and non-O139 V. cholerae in Pakistan. Data of stool specimens yielding growth of non-O1 and non-O139 V. cholerae isolated at a national referral laboratory from 1999 to 2012 were retrospectively analysed and evaluated for resistance to ampicillin, tetracycline, chloramphenicol, co-trimoxazole and ofloxacin. A total of 95 800 stool samples submitted over 1999-2012 yielded 3668 strains of V. cholerae, of which 6% were non-O1 and non-O139 V. cholerae. A high isolation rate was found in the summer season, with a peak in the year 2003. Antimicrobial susceptibility data revealed increasing resistance to co-trimoxazole and ampicillin, but strains remained highly susceptible to ofloxacin. Active surveillance of serotypes and antimicrobial susceptibility is essential to predict future epidemics and define measures to curtail the disease.

## Vitamin A Deficiency

### epidemiology

#### **Vitamin A deficiency among school going children affected by flood**

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**PJMR-Pakistan Journal of Medical Research** 2016; 55 (1): 16-19

**Keywords:** Students; Child; Floods; Cross-Sectional Studies; Surveys and Questionnaires

**Abstract:** Background: Vitamin A deficiency increases the risk of night blindness and death due to common childhood illnesses that are prevalent during emergencies like floods. The relief diet provided to flood victims is often deficient in micronutrients and minerals including vitamin A. There is a need to assess the levels of vitamin A among flood affected children to prevent morbidity and mortality caused by malnutrition. Objective: To assess the frequency of Vitamin A deficiency among school going children [8-14 years] affected and unaffected by floods of 2010 in district Nowshera. Subjects and Methods: Study was conducted in Government-registered schools situated in flood affected and unaffected areas of district Nowshera of KPK Province of Pakistan. A total of 353 children [8-14 years] were registered for study, including 190 from flood affected and 163 from unaffected areas. A questionnaire was filled for each child which included the demographic information. Three milliliter blood was drawn from each child which was processed for the estimation of vitamin A levels. Data was entered and analyzed using SPSS 20.0. Results: Among flood affected children frequency of vitamin A deficiency was 18.9%, whereas among flood unaffected children it was 6.1% showing strong association with children affected by floods [ $p < 0.001$ ]. Among illnesses during floods, children who had acute respiratory infection were on an average 3.5 times more likely to have vitamin A deficiency as compared to those who did not suffer from this disease [ $p = 0.037$ ]. Conclusion: Vitamin A deficiency was substantially higher among children affected by floods and those who had acute respiratory infection.

## Vitamin D

### analogs and derivatives

#### **Assessment of 25-hydroxyvitamin D levels in patients with resistant hypertension**

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**Medical Principles and Practice** 2016; 25 (1): 25-30

**Keywords:** Hypertension; Blood Pressure Monitoring, Ambulatory; Blood Pressure; Parathyroid Hormone; Cross-Sectional Studies; Prospective Studies

**Abstract:** Objective: To investigate the possible correlation between serum 25-hydroxyvitamin D levels and resistant hypertension [RH]. Subjects and Methods: Patients who had undergone ambulatory blood pressure measurements [ABPM] during outpatient controls were enrolled. Fifty subjects with RH, 50 with controlled hypertension [CHT] and 50 normotensive subjects [NT] were included in the study. RH was defined as 'suboptimal blood pressure control despite using 3 antihypertensive agents including a diuretic or need for 4 or more drugs to control blood pressure'. The 25-hydroxyvitamin D and parathormone levels were compared between the groups. Pearson's correlation coefficient test was applied to assess the correlation between 25-hydroxyvitamin D levels and office blood pressure [BP] and ABPM. Logistic regression analysis was used to determine the independent correlates of RH. Results: The 25-hydroxyvitamin D level was significantly lower in the RH group [17.02 +/- 5.4 ng/ml] compared to the CHT [24.9 +/- 4.8 ng/ml] and NT groups [28.0 +/- 5.7 ng/ml,  $p < 0.001$ ]. In univariate correlation analysis, 25-hydroxyvitamin D levels had a significant negative correlation with office systolic BP [ $r = -0.329$ ,  $p < 0.001$ ], office diastolic BP [ $r = -0.395$ ,  $p < 0.001$ ], systolic ambulatory BP [ $r = -0.844$ ,  $p = 0.004$ ], and diastolic ambulatory BP [ $r = -0.567$ ,  $p = 0.005$ ]. ROC analysis revealed that 25-hydroxyvitamin D levels  $< 21.50$  ng/ml predicted the presence of RH with a sensitivity of 78% and a specificity of 79% [AUC = 0.89, 95% CI 0.83-0.94]. In the multivariate logistic regression analysis, 25-hydroxyvitamin D level was independently correlated with the presence of RH [beta 0.660, 95% CI 0.572-0.760,  $p < 0.001$ ]. Conclusion: There was an independent correlation between lower 25-hydroxyvitamin D levels and presence of RH.

## Vitreous Hemorrhage

### surgery

#### Visual outcome after pars plana vitrectomy in diabetic vitreous hemorrhage

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**JPMI-Journal of Postgraduate Medical Institute** 2016; 30 (1): 23-29

**Keywords:** Diabetic Retinopathy; Diabetes Mellitus; Diabetes Complications; Vitrectomy; Vitreous Body

**Abstract:** Objectives: To determine visual outcome and frequency of complications after pars plana vitrectomy in diabetic vitreous hemorrhage. Methodology: This was interventional case series conducted at department of ophthalmology, Khyber Institute of Ophthalmic Medical Sciences, Hayatabad Medical Complex, Peshawar from January 2013 to June 2014. Known diabetic patients above 16 years of age, having vitreous hemorrhage were included. Standard three ports pars plana vitrectomy [PPV] with membrane peeling, endolaser and without endotamponade by single study surgeon was done in all patients. Best corrected visual acuity was noted pre operatively and on 1st day, 2nd week and 8th week post operatively. P- value <0.05 was considered statistically significant. Post-operative complications and visual improvement were noted at final visit. Results: Total of 50 patients having diabetic vitreous hemorrhage were included in the study. Mean age was 41.4 years. Male patients were 66%. Clear lens was present in 46% patients and cortical lens vacuoles in 36% patients. Fresh vitreous hemorrhage was present in 80%. Baseline and final post-operative best corrected visual acuity logarithm minimal angle of resolution was 1.01 +/- 0.17 and 0.74± 0.25 respectively. The difference in pre and post-operative best corrected visual acuity logarithm minimal angle of resolution was 0.045 which was statistically significant. There were no post-operative complications in 82% patients. Visual improvement was observed in 82%. Conclusion: Most patients with diabetic vitreous hemorrhage regain or retain useful vision after PPV. Many patients may suffer late complications like recurrent vitreous hemorrhage and retinal detachment after successful initial surgery requiring secondary intervention.

## Vitrification

#### Developmental potential of vitrified mouse testicular tissue after ectopic transplantation

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**Cell Journal [Yakhteh]** 2016; 18 (1): 74-82

**Keywords:** Cryopreservation; Testis; Transplantation; Spermatogenesis; Mice

**Abstract:** Objective: Cryopreservation of immature testicular tissue should be considered as an important factor for fertility preservation in young boys with cancer. The objective of this study is to investigate whether immature testicular tissue of mice can be successfully cryopreserved using a simple vitrification procedure to maintain testicular cell viability, proliferation, and differentiation capacity. Materials and Methods: In this experimental study, immature mice testicular tissue fragments [0.5-1 mm<sup>2</sup>] were vitrified-warmed in order to assess the effect of vitrification on testicular tissue cell viability. Trypan blue staining was used to evaluate developmental capacity. Vitrified tissue [n=42] and fresh [control, n=42] were ectopically transplanted into the same strain of mature mice [n=14] with normal immunity. After 4 weeks, the graft recovery rate was determined. Hematoxylin and eosin [H and E] staining was used to evaluate germ cell differentiation, immunohistochemistry staining by proliferating cell nuclear antigen [PCNA] antibody, and terminal deoxynucleotidyl transferase [TdT] dUTP Nick-End Labeling [TUNEL] assay for proliferation and apoptosis frequency. Results: Vitrification did not affect the percentage of cell viability. Vascular anastomoses was seen at the graft site. The recovery rate of the vitrified graft did not significantly differ with the fresh graft. In the vitrified graft, germ cell differentiation developed up to the secondary spermatocyte, which was similar to fresh tissue. Proliferation and apoptosis in the vitrified tissue was comparable to the fresh graft. Conclusion: Vitrification resulted in a success rates similar to fresh tissue [control] in maintaining testicular cell viability and tissue function. These data provided further evidence that vitrification could be considered an alternative for cryopreservation of immature testicular tissue.

## Werner Syndrome

### diagnosis

#### **Herlyn werner wunderlich syndrome with hematocolpos: an unusual case report of full diagnostic approach and treatment**

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**IJFS-International Journal of Fertility and Sterility** 2016; 10 (1): 136-140

**Keywords:** Hematocolpos; Werner Syndrome-therapy; Amenorrhea; Dysmenorrhea; Vagina; Infertility

**Abstract:** Herlyn-Werner-Wunderlich [HWW] syndrome is an uncommon combined müllerian duct anomalies [MDAs] and mesonephric duct malformation of female urogenital tract characterized by uterus didelphys and obstructed hemivagina and ipsilateral renal agenesis [OHVIRA] syndrome. We present a rare and unusual case of this syndrome in a 19 year-old female who suffered from hypomenorrhoea and abdominal pain. She had an obstructed hemi-vagina on right side which led to marked distention of ipsilateral cervix, while proximal hemi-vagina compressed the contralateral side causing its partial obstruction resulting in hypomenorrhoea. Understanding the imaging findings of this rare condition is important for early diagnosis in order to prevent complications which may lead to infertility.

## Zika Virus

#### **Deciphering emerging Zika and dengue viral epidemics: Implications for global maternal-child health burden**

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**Journal of Infection and Public Health** 2016; 9 (3): 240-250

**Keywords:** Flavivirus; Flavivirus Infections; Dengue Virus; Maternal-Fetal Relations; Maternal-Fetal Exchange; Epidemics

**Abstract:** Since its discovery in 1947 in Uganda and control and eradication efforts have aimed at its vectors [*Aedes* mosquitoes] in Latin America in the 1950s, an absolute neglect of Zika programs and interventions has been documented in *Aedes* endemic and epidemic-prone countries. The current unprecedented Zika viral epidemics and rapid spread in the Western hemisphere pose a substantial global threat, with associated anxiety and consequences. The lack of safe and effective drugs and vaccines against Zika or dengue epidemics further buttresses the realization from the West Africa Ebola outbreak that most emerging disease-prone countries are still poorly prepared for an emergency response. This paper examines knowledge gaps in both emerging and neglected arthropod-borne flavivirus infectious diseases associated with poverty and their implications for fostering local, national and regional emerging disease preparedness, effective and robust surveillance-response systems, sustained control and eventual elimination. Strengthening the regional and Global Health Flavivirus Surveillance-Response Network [GHFV-SRN] with other models of socio-economic, climatic, environmental and ecological mitigation and adaptation strategies will be necessary to improve evidence-based national and global maternal-child health agenda and actionplans.

## Zika Virus Infection

#### **Preparedness and readiness enhanced for ZIKV**

WHO Eastern Mediterranean Regional Office

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World Health Organization. Regional Office for the Eastern Mediterranean - Communicable Diseases Prevention and Control - Pandemic and Epidemic Diseases

**Weekly Epidemiological Monitor** 2016; 09 (10): 1

**Keywords:** Arbovirus Infections; Zika Virus Infection; Mediterranean Region; *Aedes*; Zika Virus

**Abstract:** In view of the current threats of introduction of Zika Virus [ZIKV] infection, preparedness and readiness has been enhanced across the countries of the Eastern Mediterranean Region

## diagnosis

### **Severe abdominal pain in a patient with Zika infection: a case in Risar-alda, Colombia**

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**Journal of Infection and Public Health** 2016; 9 (3): 372-373

**Keywords:** Abdominal Pain; Zika Virus; Aedes; Arboviruses

## transmission

### **Risk of Transmission of ZIKV in the Eastern Mediterranean Region**

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World Health Organization. Regional Office for the Eastern Mediterranean - Communicable Diseases Prevention and Control - Pandemic and Epidemic Diseases

**Weekly Epidemiological Monitor** 2016; 09 (07): 1

**Keywords:** Mediterranean Region; Risk; Aedes; Zika Virus

**Abstract:** After the declaration of WHO that the recent cluster of microcephaly cases and other neurologic disorders might be associated with the transmission and circulation of Zika Virus Infection [ZIKV] in the America region, focus has been renewed on the areas where the risk of potential transmission of ZIKV exist in the Eastern Mediterranean Region.



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- Darabi, Shahram**  
PROSTATITIS (drug therapy)
- Davani, Shahrbanou Karimi**  
LEUKEMIA, LYMPHOCYTIC, CHRONIC,  
B-CELL (genetics)
- Dayawansa, Samantha**  
MENINGIOMA (diagnosis)
- De Martino, Maurizio**  
SCALP DERMATOSES (epidemiology)
- De Souza, Iliada Rainha**  
LACTASE (genetics)
- Deemeh, Mohammad Reza**  
ACETYLCYSTEINE
- Dehbozorgian, Mahnaz**  
OTOLARYNGOLOGY
- Delavari, Sajad**  
SCHOOLS, MEDICAL
- Delavari, Somayeh**  
SCHOOLS, MEDICAL
- Denholm, R.**  
CARCINOGENS
- Derakhshanpour, F.**  
CHILD ABUSE
- Dev, Vas**  
MALARIA (prevention and control)
- Dianatpour, Mehdi**  
CHROMOSOMES, HUMAN, PAIR 9
- Digard, Paul**  
ORTHOMYXOVIRIDAE
- Dilnawaz, Mansoor**  
CLOBETASOL (adverse effects)
- Dobo, Sylvia**  
HEMORRHAGIC FEVER, EBOLA (therapy)
- Dogan, Mustafa**  
STAPHYLOCOCCUS AUREUS
- Doiphode, Sanjay**  
SALMONELLA ENTERICA (genetics)
- Doostkam, Aida**  
OTOLARYNGOLOGY
- Dragoni, Federica**  
SCALP DERMATOSES (epidemiology)
- Duman, Selcuk**  
HYALURONIC ACID (pharmacology)
- Durrani, Faiza**  
SCHIZOPHRENIA (drug therapy)
- Ebadifar, Asghar**  
MYOFASCIAL PAIN SYNDROMES (therapy)
- Ebrahimi, Marzieh**  
GLYCOPROTEINS
- Ebrahimi, V.**  
GLYCOCONJUGATES
- Ebrahimzadeh, Azade**  
TUBERCULOSIS, PULMONARY
- Eftekhar, Maryam**  
FERTILIZATION IN VITRO
- Eftekharsadat, Bina**  
AMYLOID NEUROPATHIES, FAMILIAL
- El-Kattan, Yahya**  
HEMORRHAGIC FEVER, EBOLA (therapy)
- Eimani, Hussein**  
IN VITRO OOCYTE MATURATION  
TECHNIQUES
- Eini, Ali Mohammad**  
LEVOFLOXACIN (pharmacology)
- Eivazlou, Heidar**  
SYMPATHETIC NERVOUS SYSTEM
- El Awa, Fatimah**  
TOBACCO
- El Banna, Rokia**  
BONE DENSITY
- El Emrani, L.**  
QUALITY OF LIFE
- El Feky, Samar**  
ETHICS, MEDICAL
- El Ghardallou, M.**  
SMOKING (epidemiology)
- El Khoury, C.**  
MEALS
- El Masry, Sahar A.**  
BONE DENSITY
- El Nihum, Ibrahim M.**  
MENINGIOMA (diagnosis)

- El Tantawi, M.**  
LANGUAGE TESTS
- Elmadhoun, W.M.**  
TUBERCULOSIS (epidemiology)
- Emad, Mohamadreza**  
SYMPATHETIC NERVOUS SYSTEM
- Emamghoreishi, Masoumeh**  
CARUM
- Enstone, Joanne E.**  
ORTHOMYXOVIRIDAE
- Er, Okan**  
CORONARY ARTERY DISEASE
- Erbasar, Giizin Neda Hasanoglu**  
GRANULOMA, PYOGENIC (therapy)
- Ertorer, M. Eda**  
POLYCYSTIC OVARY SYNDROME
- Esfahani Mohammad Hossein Nasr**  
ACETYLCYSTEINE
- Esfahani, Ali**  
LEUKEMIA, MYELOID, ACUTE
- Esfahani, Mohammad Hossein Nasr**  
INFERTILITY, FEMALE
- Eslaminejad, Touba**  
INSULIN (chemical synthesis)
- Esteghamatp, Alireza**  
LEARNING
- Eyrisofla, Nazila Vahidi**  
LEVOFLOXACIN (pharmacology)
- Fabroni, Caterina**  
SCALP DERMATOSES (epidemiology)
- Faghih, Zahra**  
EDUCATION, MEDICAL, CONTINUING
- Faghihi, Seyed Aliakbar**  
EDUCATION, MEDICAL, CONTINUING
- Fahim, Amin**  
DIABETES, GESTATIONAL (diagnosis)
- Fakhoury, Hana M.**  
CORONAVIRUS INFECTIONS
- Fallahzadeh, Hossein**  
EDUCATION, MEDICAL
- Fani, N.**  
HEPATOLENTICULAR DEGENERATION
- Faoyri, S.**  
INTENSIVE CARE UNITS, NEONATAL
- Farahangiz, Saman**  
STUDENTS, MEDICAL
- Fard, Behrooz Ghareisi**  
SPERMATOOZOA
- Fard, Mohammad Javad Kharazi**  
AGGREGATIBACTER  
ACTINOMYCETEMCOMITANS
- Fard, Soudeh Ghafouri**  
CHROMOSOMES, HUMAN, PAIR 9
- Farooq, Ammara**  
OBESITY
- Farooqi, Javed Iqbal**  
HEPATITIS C, CHRONIC (therapy)
- Farran, Yvette**  
NOCARDIA INFECTIONS (diagnosis)
- Farsinejad, Alireza**  
INSULIN (chemical synthesis)
- Farzaneh, Mohamad Reza**  
LEUKEMIA, LYMPHOCYTIC, CHRONIC,  
B-CELL (genetics)
- Fasih, N.**  
VIBRIO CHOLERAEE
- Fatahian, Reza**  
ASPIRIN (pharmacology)
- Fatima, Gulnaz**  
DEPRESSION (psychology)
- Fazal, Fazal**  
EXERCISE
- Fazel, A.R.**  
GLYCOCONJUGATES
- Fcillah, R.**  
HEALTHCARE FACILITIES, MANPOWER, AND  
SERVICES
- Fiekert, K.**  
DRUG USERS
- Filipovic, Aleksandar**  
PANNICULITIS, PERITONEAL (diagnosis)

**Firoozabadi, Razieh Deghani**  
FERTILIZATION IN VITRO

**Firouzi, Javad**  
GLYCOPROTEINS

**Firozeh, Z.**  
PHYSICAL ENDURANCE

**Fomeshi, Motahareh Rajabi**  
GLYCOPROTEINS

**Fonkem, Ekokobe**  
MENINGIOMA (diagnosis)

**Fooladi, A.A. Imani**  
BACTERIAL INFECTIONS (epidemiology)

**Forghani, Hosein**  
FERTILIZATION IN VITRO

**Fowler, Rob**  
CORONAVIRUS INFECTIONS (epidemiology)

**Fowler, Robert A.**  
CORONAVIRUS INFECTIONS

**Fujii, Eri**  
TOOTH MOVEMENT

**Fujita, Tadashi**  
TOOTH MOVEMENT

**Gaidhane, Abhay**  
FACULTY

**Galun, Danijel**  
PANNICULITIS, PERITONEAL (diagnosis)

**Garcell, Humberto G.**  
HAND HYGIENE

**Garcia, Fayna**  
ORTHOMYXOVIRIDAE

**Garedew, Legesse**  
SHIGELLA

**Gaudelus, Joel**  
MENINGOCOCCAL INFECTIONS (epidemiology)

**Geier, David A.**  
HEPATITIS B VACCINES

**Geier, Mark R.**  
HEPATITIS B VACCINES

**Gekas, Christos**  
HALLUX VALGUS

**Geranmayeh, Mehrnaz**  
LEARNING

**Ghaffarzad, Aisa**  
POLYCYSTIC OVARY SYNDROME

**Ghafoor, Farkhanda**  
VITAMINADEFICIENCY (epidemiology)

**Ghahramani, Fariba**  
OUTLIERS, DRG

**Ghalyanchi, Akhgar**  
PROSTATITIS (drug therapy)

**Ghanaei, Hamid**  
ADIPONECTIN

**Ghanavati, Shirin**  
RESEARCH

**Ghanchi, N.K.**  
VIBRIO CHOLERAEE

**Ghandehari, Kavian**  
MIGRAINEDISORDERS (drug therapy)

**Ghandehari, Kosar**  
MIGRAINEDISORDERS (drug therapy)

**Ghani, Eijaz**  
BLOOD DONORS

**Gharavi, A.G. Kose**  
INFANT MORTALITY

**Ghasemi, Zahra**  
HEALTH RESOURCES

**Ghasemipoor, Mohsen Zafar**  
SYMPATHETIC NERVOUS SYSTEM

**Ghayoomi, A.**  
TUBERCULOSIS (therapy)

**Ghazanfari, Rezvaneh**  
DENTAL DEBONDING

**Ghazani, Arash Babaei**  
AMYLOID NEUROPATHIES, FAMILIAL

**Gholami, A.**  
REPRODUCTIVE HEALTH SERVICES

**Ghorbani, Rostam**  
TESTOSTERONE

**Ghumman, Adeel Qamar**  
BILE DUCTS (injuries)

**Gilani, M.D.**  
TESTOSTERONE

**Gjebrea, O.**  
CARCINOGENS

**Gnanapragasam, Sam**  
DISASTERS

**Gocmen, Ahmet**  
CERVIX UTERI (pathology)

**Golami, Maryam**  
HEALTH CARE REFORM

**Golestanfar, Arefe**  
ADIPONECTIN

**Gondal, Zafar Iqbal**  
BILE DUCTS (injuries)

**Goodarzi, Anahita**  
DELIVERY OF HEALTH CARE (organization and administration)

**Goodarzi, Effat**  
DELIVERY OF HEALTH CARE (organization and administration)

**Goodarzi, Mohammad Reza**  
DELIVERY OF HEALTH CARE (organization and administration)

**Gopivallabh, Madhusudhan Madihalli**  
HERNIA, INGUINAL (complications)

**Greatorex, Jane**  
ORTHOMYXOVIRIDAE

**Gul, Asif Alam**  
OTITIS MEDIA, SUPPURATIVE (therapy)

**Gultekin, Sibel Elif**  
GRANULOMA, PYOGENIC (therapy)

**Gungor, Baris**  
VITAMIN D (analogs and derivatives)

**Gupta, Vinod K.**  
TUBERCULOSIS, MULTIDRUG-RESISTANT (epidemiology)

**Habibullah, Sultana**  
MEASLES (epidemiology)

**Hadad, Amin Hasanzadeh**  
URINARY BLADDER CALCULI (therapy)

**Hadadnazhad, M.**  
MULTIPLE SCLEROSIS (physiopathology)

**Haddar, Djamel**  
NEURILEMMOMA (diagnosis)

**Hadiimanieh, Mohammad**  
STUDENTS, MEDICAL

**Hafeez, Qurat-ul-Ain**  
DRUG INTERACTIONS

**Hafizurehman**  
VENTRICULAR DYSFUNCTION, LEFT

**Haghani, Fariba**  
LEARNING

**Haghpanah, Sezaneh**  
STUDENTS, NURSING

**Hagos, Zenabu**  
SHIGELLA

**Haider, A.N.**  
TRIGEMINAL NEURALGIA (therapy)

**Haider, Aftab**  
HEPATITIS C, CHRONIC (therapy)

**Hajeer, A.M.H.**  
MIDDLE EAST RESPIRATORY SYNDROME  
CORONAVIRUS (isolation and purification)

**Hajjarian, Homa**  
LEISHMANIASIS (etiology)

**Halasa, N.**  
INTENSIVE CARE UNITS, NEONATAL

**Halaweh, Hadeel**  
ACCIDENTAL FALLS

**Hamaideh, S.H.**  
FAMILY PLANNING SERVICES

**Handra Luca, Adriana**  
NEURILEMMOMA (diagnosis)

**Hangar, Santosh**  
TOURETTE SYNDROME (etiology)

**Hanif, Maliha**  
IMMUNIZATION

**Hanouneh, S.I.**  
FAMILY PLANNING SERVICES

**Hanumanthaiah, Kunthurdoddi Sanjeevaiah**  
HERNIA, INGUINAL (complications)

**Haroon, Hussain**  
LIVER CIRRHOSIS

- Harris, Frank S.**  
MENINGIOMA (diagnosis)
- Hasan, Sadaf**  
DEPRESSION (epidemiology)
- Hasankhani, Ebrahim Ghayem**  
SPONDYLOLISTHESIS (surgery)
- Hasdemir, Pinar Solmaz**  
EMBRYO TRANSFER
- Hashemi, Mehrdad**  
PREIMPLANTATION DIAGNOSIS
- Hashemi, Seyed Basir**  
COCHLEAR IMPLANTS
- Hashempour, Mohammad Mahdi**  
AMIKACIN (blood)
- Hashim, Rizwan**  
COLISTIN (administration and dosage)
- Hashmi, Zahid Yaseen**  
HEPATITIS C, CHRONIC (therapy)
- Hassan, Md. Imtaiyaz**  
COMPUTER COMMUNICATION NETWORKS
- Hassan, Soaib Ali**  
AZADIRACHTA
- Hassanpour, Hossein**  
ADIPONECTIN
- Hassanzadeh, Gholamreza**  
TESTOSTERONE
- Hatam, Nahid**  
SCHOOLS, MEDICAL
- Hatipoglu, Hasan**  
MULTIPLE SCLEROSIS
- Hatipoglu, Mujgan Gungor**  
MULTIPLE SCLEROSIS
- Hattori, Masahira**  
MICROBIOTA
- Hausdorff, William P.**  
PNEUMOCOCCAL INFECTIONS (epidemiology)
- Hayden, Frederick G.**  
CORONAVIRUS INFECTIONS
- Hayward, Andrew**  
ORTHOMYXOVIRIDAE
- Heidari, Mahmood Alipour**  
PROSTATITIS (drug therapy)
- Hejazi, K.**  
PHYSICAL ENDURANCE
- Hejazi, Najmeh**  
NUTRITION ASSESSMENT
- Hooker, Brian S.**  
HEPATITIS B VACCINES
- Hopkins, Nick**  
HEALTH
- Hossain, M.A.**  
DIABETIC FOOT (etiology)
- Hosseini, Ahmad**  
MESENCHYMAL STROMAL CELLS
- Hosseini, Fakhrosadat**  
EDUCATION, MEDICAL
- Hosseini, S.R.**  
COLORECTAL NEOPLASMS (epidemiology)
- Hosseini, S.R. Attarzadeh**  
PHYSICAL ENDURANCE
- Hosseini, Seyed Jalil**  
EDUCATION, MEDICAL, CONTINUING
- Huang, Jason H.**  
MENINGIOMA (diagnosis)
- Hui, David S.**  
CORONAVIRUS INFECTIONS
- Husain, S.**  
IMMUNIZATION
- Hussain, Altaf**  
MENIERE DISEASE (drug therapy)
- Hussain, M Hamaza**  
DENTAL CARE
- Hussain, Majid**  
CLOBETASOL (adverse effects)
- Hussain, Maqbool**  
MITRAL VALVE STENOSIS
- Hussain, Maryam**  
HYPERTENSION (epidemiology)
- Hussain, Sameed**  
COLORECTAL NEOPLASMS

- Hussain, Zakir**  
EYE FOREIGN BODIES (surgery)
- Ibrahim, Hasan**  
GLUCOSEPHOSPHATE DEHYDROGENASE DEFICIENCY
- Iftikhar, Raheel**  
DIABETES MELLITUS, TYPE 2 (therapy)
- Ikramullah**  
ACUTE KIDNEY INJURY (epidemiology)  
VENTRICULAR DYSFUNCTION, LEFT
- Iliou, Kalliopi**  
HALLUX VALGUS
- Imaad, Ur Rehman**  
RADIOLOGY, INTERVENTIONAL
- Imtiaz, Nauman**  
ARTERIOVENOUS FISTULA
- Iqbal, Amjad**  
HELICOBACTER INFECTIONS
- Iqbal, Asif**  
VITREOUS HEMORRHAGE (surgery)
- Iqbal, M. Asif**  
VENTRICULAR DYSFUNCTION, LEFT
- Iqbal, Mohammad Zafar**  
DIABETIC FOOT (diagnosis)
- Iqbal, Muhammad Zohaib**  
DIABETES MELLITUS, TYPE 2 (therapy)
- Iqbal, Rizwan**  
TUBERCULOSIS, PULMONARY (diagnosis)
- Iravanpour, Farideh**  
SPERMATOOZA
- Ishaque, M Yasir**  
DENTAL CARE
- Ishfaq, Mohammad**  
TRIGEMINAL NEURALGIA (therapy)
- Ishrat, Romana**  
COMPUTER COMMUNICATION NETWORKS
- Islam, Asimul**  
COMPUTER COMMUNICATION NETWORKS
- Ismail, Iqra**  
FAST FOODS
- Ivanovic, Aleksandar**  
PANNICULITIS, PERITONEAL (diagnosis)
- Jaberipour, Mansooreh**  
MESENCHYMAL STROMAL CELLS
- Jafarabadi, M. Asghari**  
COLORECTAL NEOPLASMS (epidemiology)
- Jafarzadeh, Meisam**  
TRANSFORMING GROWTH FACTOR BETA
- Jafri, Syed Aoun Muhammad**  
IMMUNIZATION
- Jaganmaya, Kajekar**  
HERNIA, INGUINAL (complications)
- Jahangir, Syed**  
HEPATITIS C, CHRONIC
- Jahanzad, Issa**  
TESTOSTERONE
- Jahromf, Zohreh Badiyepymaie**  
LEARNING
- Jain, Sanjay**  
TUBERCULOSIS, MULTIDRUG-RESISTANT (epidemiology)
- Jalili, Cyrus**  
CAROTENOIDS
- Jamal, Akmal**  
VENOUS THROMBOSIS
- Jan, Sanauallah**  
VITREOUS HEMORRHAGE (surgery)  
EYE FOREIGN BODIES (surgery)
- Javaid, Arshad**  
PROFESSIONAL AUTONOMY
- Javanmard, Babak**  
URINARY BLADDER CALCULI (therapy)
- Jehangir, Maham**  
RADIOLOGY, INTERVENTIONAL
- Jorge, Antonio Olavo C.**  
BACCHARIS
- Jouhari, Zahra**  
LEARNING
- Jouybari, Ali Ghabeli**  
MIGRAINE DISORDERS (drug therapy)
- Jovanovic, Miodrag**  
PANNICULITIS, PERITONEAL (diagnosis)
- Jr, David Garrett**  
MENINGIOMA (diagnosis)

- Julander, Justin**  
HEMORRHAGIC FEVER, EBOLA (therapy)
- Kabay, Sibel Canbaz**  
MULTIPLE SCLEROSIS
- Kadivar, Ali**  
ADIPONECTIN
- Kamal, Ahmed**  
GASTROSTOMY
- Kamal, Anila**  
FLOODS
- Kamali, Melek Bulut**  
EMBRYO TRANSFER
- Kamaneh, Elnaz Amanollahi**  
LEUKEMIA, MYELOID, ACUTE
- Kamani, Lubna**  
HEPATITIS C, CHRONIC (therapy)
- Kamran, Kazem**  
RETINOPATHY OF PREMATURITY (surgery)
- Kamyariravani**  
OTOLARYNGOLOGY
- Kanavaros, Panagiotis**  
HALLUX VALGUS
- Kandeil, Walid**  
PNEUMOCOCCAL INFECTIONS (epidemiology)
- Kangrani, Hamed Mohammadi**  
MENTAL DISORDERS (nursing)
- Karagoz, F.**  
TUBERCULOSIS, MULTIDRUG-RESISTANT (diagnosis)
- Karami, Hosein**  
URINARY BLADDER CALCULI (therapy)
- Karbalay Doust, Saied**  
RUBELLA VIRUS
- Karim, Jumanah**  
SEIZURES
- Karimfar, Mohammad Hassan**  
PROSTATITIS (drug therapy)
- Karimi, Mahshid**  
HOSPITALS, PRIVATE
- Karimian, Seyed Morteza**  
SUBSTANCE WITHDRAWAL SYNDROME
- Karli, G. Sensoyi A.**  
TUBERCULOSIS, MULTIDRUG-RESISTANT (diagnosis)
- Karmaker, Mousumi**  
DIABETIC FOOT (etiology)
- Karyani, A.K.**  
HEALTH CARE FACILITIES, MANPOWER, AND SERVICES
- Katoch, Vishwa M.**  
TUBERCULOSIS, MULTIDRUG-RESISTANT (epidemiology)
- Katuli, H. Eimani**  
INFANT MORTALITY
- Kazerooni, Marjaneh**  
SPERMATOOZOA
- Keivan, Mona**  
CAROTENOIDS
- Kerkhove, Maria D. Van**  
CORONAVIRUS INFECTIONS
- Kermani, Hamed Reihani**  
ASPIRIN (pharmacology)
- Kermani, Iraj Asvadi**  
LEUKEMIA, MYELOID, ACUTE
- Kern, Janet K.**  
HEPATITIS B VACCINES
- Keshavarz, Zeinab**  
PRENATAL DIAGNOSIS
- Keshtgar, Sara**  
SPERMATOOZOA
- Keshtkaran, Ali**  
HEALTH RESOURCES
- Keshtkaran, Vida**  
HEALTH RESOURCES
- Keshtvarz, M.**  
LACTOBACILLUS ACIDOPHILUS
- Khademi, Gholam Reza**  
LEUKOENCEPHALITIS, ACUTE HEMORRHAGIC
- Khader, A.**  
EDUCATION, MEDICAL
- Khalighi, Hamid Reza**  
MYOFASCIAL PAIN SYNDROMES (therapy)

- Khalil, Khalilullah**  
SCHIZOPHRENIA (drug therapy)
- Khalili, Gholamreza**  
POLYCYSTIC OVARY SYNDROME
- Khan, Ajab**  
ACUTE KIDNEY INJURY (epidemiology)
- khan, Amjad**  
HYPERTENSION (epidemiology)
- Khan, Anwaar A.**  
HEPATITIS C, CHRONIC (therapy)
- khan, Asif Ullah**  
HYPERTENSION (epidemiology)
- Khan, Aurangzeb**  
BILE DUCTS (injuries)
- Khan, E.**  
VIBRIO CHOLERAE
- Khan, Imtinan Akram**  
AZADIRACHTA
- Khan, Maryam**  
OTITIS MEDIA, SUPPURATIVE (therapy)
- Khan, Muhammad Ahmad**  
OPERATING ROOMS
- Khan, Muhammad Safdar**  
URINARY TRACT INFECTIONS (etiology)
- Khan, Muhammad Sarwar**  
GLUCOSEPHOSPHATE DEHYDROGENASE DEFICIENCY
- Khan, Muhammad Tariq**  
VITREOUS HEMORRHAGE (surgery)
- Khan, Rao Mushkbaar Ali**  
SCHIZOPHRENIA (drug therapy)
- Khan, Riaz Anwar**  
ACUTE KIDNEY INJURY (epidemiology)
- Khan, Rukhsana**  
MALNUTRITION (epidemiology)
- Khan, Sadique Ullah**  
EYE FOREIGN BODIES (surgery)
- Khani, Parisa**  
FERTILIZATION IN VITRO
- Khankeh, Hamid Reza**  
EDUCATION, MEDICAL, CONTINUING LEARNING
- Kharazmi, Erfan**  
PHYSICIANS, FAMILY
- Khater, Emad I.M.**  
ZIKA VIRUS
- Khattak, Azmatullah**  
TRIGEMINAL NEURALGIA (therapy)
- Khayamzadeh, Mina**  
AGGREGATIBACTER  
ACTINOMYCETEMCOMITANS
- Khayatan, Tayebeh**  
PSYCHOTHERAPY
- Khazaei, Mozafar**  
CAROTENOIDS
- Khodabandeh, Zahra**  
MESENCHYMAL STROMAL CELLS
- Khoei, Heidar Heidari**  
ADIPONECTIN
- Khorasani, Efat**  
ADRENAL HYPERPLASIA, CONGENITAL (diagnosis)
- Khosravani, Pardis**  
GLYCOPROTEINS
- Khound, Kamal**  
MALARIA (prevention and control)
- Kian Fatemeh Rahimi**  
SURROGATE MOTHERS
- Kiani, Ehsan Masud**  
GASTROSTOMY
- Kiani, Faran**  
NEPHROSTOMY, PERCUTANEOUS
- Killingley, Benjamin**  
ORTHOMYXOVIRIDAE
- Kim, Se Joong**  
TRACHEAL STENOSIS
- King, Paul G.**  
HEPATITIS B VACCINES
- Kirubakaran, Richard**  
ACCIDENTS, TRAFFIC
- Kitsoulis, Panagiotis**  
HALLUX VALGUS
- Kocyigit, Ismail Doruk**  
ALVEOLAR BONE GRAFTING (methods)



- Kodangal, Srikanth**  
PHOTOCHEMOTHERAPY
- Koh, Young Min**  
TRACHEAL STENOSIS
- Kohan, S.**  
REPRODUCTIVE HEALTH SERVICES
- Koochi, Mohammad Kazem**  
SUBSTANCE WITHDRAWAL SYNDROME
- Kotian, Pravin**  
HEMORRHAGICFEVER,EBOLA(therapy)
- Kreslake, Jennifer**  
RESPIRATORY TRACT INFECTIONS
- Krishnan, Suresh Palamadai**  
EPIDERMIS
- Kumar, Amar Nagesh**  
POLYCYSTIC OVARY SYNDROME
- Kumar, Dilip**  
TUBERCULOSIS, MULTIDRUG-RESISTANT  
(epidemiology)
- Kunimatsu, Ryo**  
TOOTH MOVEMENT
- Lafond, Kathryn E.**  
RESPIRATORY TRACT INFECTIONS
- Laleh, Parvin Akbarzadeh**  
LEUKEMIA, MYELOID, ACUTE
- Lankarani, Marges Bagheri**  
POLYCYSTIC OVARY SYNDROME
- Lanzavecchia, Antonio**  
CORONAVIRUS INFECTIONS (therapy)
- Latifi, M.F.**  
DISASTERS
- Lazzeri, Linda**  
SCALP DERMATOSES (epidemiology)
- Ibrahim, Mariamma**  
SALMONELLA ENTERICA (genetics)
- Lee, Seung Hyeun**  
TRACHEAL STENOSIS
- Li, Min**  
STROKE
- Limam, M.**  
SMOKING (epidemiology)
- Liporoni, Priscila Christiane S.**  
BACCHARIS
- Long, Chuyan**  
STROKE
- Lowenthal, John**  
COMMUNICABLE DISEASES
- Irfan, S.**  
VIBRIO CHOLERAE
- Isyar, Mehmet**  
STAPHYLOCOCCUS AUREUS
- Iuliano, Angela D.**  
RESPIRATORY TRACT INFECTIONS
- Mabry, R.M.**  
MOTOR ACTIVITY
- Maghsoudloo, D.**  
TUBERCULOSIS (therapy)
- Mahani, Seyed Amirmahdi Nematollahi**  
INSULIN (chemical synthesis)
- Mahani, Seyed Nouredin Nematollahi**  
INSULIN (chemical synthesis)
- Mahirogullari, Mahir**  
STAPHYLOCOCCUS AUREUS
- Mahjour, Jaouad**  
CORONAVIRUS INFECTIONS (epidemiology)
- Mahmodzade, Aziz**  
ARBUTIN
- Mahmood, Asad**  
BLOOD DONORS
- Mahmood, Tariq**  
LIVER CIRRHOSIS
- Mahmud, Ghazala**  
GENITAL NEOPLASMS, FEMALE (therapy)
- Majeed, Asifa**  
STAT1 TRANSCRIPTION FACTOR
- Majid, Shahid**  
HEPATITIS C, CHRONIC (therapy)
- Malakouti, Seyed kazem**  
MENTAL DISORDERS (nursing)
- Maleki, Elham Mokhber**  
IN VITRO OOCYTE MATURATION  
TECHNIQUES

- Malekirad, Ali Akbar**  
ORGANOPHOSPHATE POISONING
- Malik, Mamunur Rahman**  
CORONAVIRUS INFECTIONS (epidemiology)
- Malik, Qudratullah**  
HELICOBACTER INFECTIONS
- Malik, Saad Mushtaq**  
GLAUCOMA (pathology)
- Malik, Sumera**  
GENITAL NEOPLASMS, FEMALE (therapy)
- Malik, Zaka Ullah**  
BILE DUCTS (injuries)
- Malkawi, A.O.**  
FAMILY PLANNING SERVICES
- Mallouli, M.**  
SMOKING (epidemiology)
- Maloth, Kotya Naik**  
PHOTOCHEMOTHERAPY
- Mandil, Ahmed**  
ETHICS, MEDICAL
- Mangiri, Amalya**  
RESPIRATORY TRACT INFECTIONS
- Mansour, A.M. Hamdan**  
FAMILY PLANNING SERVICES
- Manzoor, Farida**  
RESPIRATORY TRACT INFECTIONS
- Manzoor, Naveeda**  
STAT1 TRANSCRIPTION FACTOR
- Marcantonio, Rosemary Adriana Chierici**  
DENTAL SCALING
- Marhabi, Saranaz Azari**  
MYOFASCIAL PAIN SYNDROMES (therapy)
- Marhamati, Saadat**  
RESEARCH
- Maroufizadeh, Saman**  
SURROGATE MOTHERS
- Marwan, Yousef**  
SEIZURES
- Masood, Sumaira**  
STRESS DISORDERS, POST-TRAUMATIC
- Masroor, Muhammad**  
NEURALGIA, POSTHERPETIC
- Masuadi, Emad M.**  
CORONAVIRUS INFECTIONS
- Masud, Manan**  
BILE DUCTS (injuries)
- Masulovic, Dragan**  
PANNICULITIS, PERITONEAL (diagnosis)
- Matin, B.K.**  
HEALTH CARE FACILITIES, MANPOWER, AND SERVICES
- Matoq, Amina**  
ACCIDENTS, TRAFFIC
- Mazhar ul Haque**  
DIABETES, GESTATIONAL (diagnosis)
- Mazloom, Zohreh**  
NUTRITION ASSESSMENT
- Mehmood, Arshad**  
NEPHROSTOMY, PERCUTANEOUS
- Mehmood, Khalid**  
DIABETIC FOOT (diagnosis)
- Mehran, Abbas**  
SURROGATE MOTHERS
- Mehranjani, M. Soleimani**  
CAMELLIA SINENSIS
- Mehreen, Sobia**  
INFERIOR WALL MYOCARDIAL INFARCTION (physiopathology)
- Meka, Nagajyothi**  
PHOTOCHEMOTHERAPY
- Memarpour, Mahtab**  
STUDENTS, DENTAL
- Memish, Ziad A.**  
TUBERCULOSIS, MULTIDRUG-RESISTANT
- Memon, Abbas**  
HIP FRACTURES
- Memon, Abdul Salam**  
VENOUS THROMBOSIS
- Memon, Shakeel Ahmed**  
HIP FRACTURES
- Messias Reason, Lara Jose**  
LACTASE (genetics)

- Micev, Marjan**  
PANNICULITIS, PERITONEAL (diagnosis)
- Mir, E.**  
PHYSICAL ENDURANCE
- Mir, Mohammadi MT**  
MUSCULOSKELETAL DISEASES (epidemiology)
- Mirabzadeh, Arash**  
MENTAL DISORDERS (nursing)
- Miranda, Fernando R.**  
HAND HYGIENE
- Mirbeigi, S.**  
DISASTERS
- Miri, Maryam**  
PROSTATITIS (drug therapy)
- Mirjalali, Named**  
LEISHMANIASIS (etiology)
- Mirkazemi, Masoud**  
SPONDYLOLISTHESIS (surgery)
- Miryounesi, Mohammad**  
CHROMOSOMES, HUMAN, PAIR 9
- Mirza, Faizan**  
EXERCISE
- Mirzaei, Mohammad Mousavi**  
MIGRAINE DISORDERS (drug therapy)
- Mishra, Monali P.**  
URINARY TRACT INFECTIONS
- Moadab, Neda**  
HEALTH RESOURCES
- Moayeri, Mina**  
PREIMPLANTATION DIAGNOSIS
- Mobaiyen, H.**  
MYCOPLASMA HOMINIS (isolation and purification)
- Mobeen, Ahmed**  
RADIOLOGY, INTERVENTIONAL
- Mobin, Ahsan**  
LIVER CIRRHOSIS
- Modarresi, Mohammad Hossein**  
PREIMPLANTATION DIAGNOSIS
- Moezzi, Leili**  
PRENATAL DIAGNOSIS
- Moghadam, Hassan Dianat**  
RADIATION-PROTECTIVE AGENTS
- Moghadamnia, D.**  
PHOENICEAE  
DIAZINON (pharmacology)
- Mohammad, Fahad**  
GLIOMA (therapy)
- Mohammad, Syed Hosseinpanah**  
HYDATIDIFORM MOLE (epidemiology)
- Mohammadi, F.**  
REPRODUCTIVE HEALTH SERVICES
- Mohammadzadeh, Kh. Ali**  
TUBERCULOSIS (therapy)
- Mohammed, Hussni O.**  
SALMONELLA ENTERICA (genetics)
- Mohebbali, Mehdi**  
LEISHMANIASIS (etiology)
- Mohsin, Saima Naz**  
VITAMIN A DEFICIENCY (epidemiology)
- Mohsin, Shamaila**  
STRESS DISORDERS, POST-TRAUMATIC
- Moini, Ashraf**  
POLYCYSTIC OVARY SYNDROME
- Mojahedi, Seyed Masoud**  
MYOFASCIAL PAIN SYNDROMES (therapy)
- Mokhtari, M.**  
PHOENICEAE
- Momayyezi, Mahdieh**  
EDUCATION, MEDICAL
- Momayyezi, Mohammad**  
EDUCATION, MEDICAL
- Momenzadeh, Sirous**  
MYOFASCIAL PAIN SYNDROMES (therapy)
- Monajemi, Alireza**  
LEARNING
- Monfared, Ali Shabestani**  
ARBUTIN
- Monshizadeh, Leila**  
COCHLEAR IMPLANTS
- Monzavi, Abbas**  
LASERS, SOLID-STATE

- Moosavi, Seyed Akbar**  
RADIATION-PROTECTIVE AGENTS
- Moradi, B.**  
MULTIPLE SCLEROSIS (physiopathology)
- Morales, Alfonso J. Rodriguez**  
ZIKA VIRUS INFECTION (diagnosis)
- Moravej, Hossein**  
DIABETES MELLITUS, TYPE 1 (therapy)
- Moretti, Silvia**  
SCALP DERMATOSES (epidemiology)
- Morin, Anne Sophie**  
NEURILEMMOMA (diagnosis)
- Morsi, M.**  
MOTOR ACTIVITY
- Mortazavi, Hamed**  
MYOFASCIAL PAIN SYNDROMES (therapy)
- Mosalanejad, Leili**  
LEARNING
- Mostafavi, F.**  
REPRODUCTIVE HEALTH SERVICES
- Motaghi, B.**  
MORUS
- Motaghinejad, Majid**  
SUBSTANCE WITHDRAWAL SYNDROME
- Motamedifar, Mohammad**  
RUBELLA VIRUS
- Motazedian, Mohammad Hossein**  
LEISHMANIASIS (etiology)
- Mottaghipour, Yasaman**  
MENTAL DISORDERS (nursing)
- Mougahi, Seyed Mohammad Hossein Noori**  
VITRIFICATION
- Mousavi, M.**  
MYCOPLASMAHOMINIS (isolation and purification)
- Mowla, Seyed Javad**  
OCTAMER TRANSCRIPTION FACTOR-3
- Mozdarani, Hossein**  
ARBUTIN
- Mtiraoui, A.**  
SMOKING (epidemiology)
- Muhammad, Khurshid**  
DIABETES MELLITUS, TYPE 2 (therapy)
- Mukhtar, Uzair**  
AZADIRACHTA
- Mullick, M. Shakeel Aamir**  
MEASLES (epidemiology)
- Mumtaz, Madiha**  
NON-ALCOHOLIC FATTY LIVER DISEASE (epidemiology)
- Munir, Muhammad Arif**  
AZADIRACHTA
- Munir, Muhammad Kashif**  
POLIOMYELITIS (prevention and control)  
TUBERCULOSIS, PULMONARY (diagnosis)
- Murray, Virginia**  
DISASTERS
- Mushtaq, Mamoona**  
DENGUE (psychology)
- Mushtaq, Rubina**  
PROGESTERONE (antagonists and inhibitors)
- Mushtaq, Saleem**  
NEURALGIA (therapy)
- Mushtaq, Shomaila**  
AZADIRACHTA
- Mustafa, H.**  
TUBERCULOSIS (epidemiology)
- Nabeiei, Parisa**  
RESEARCH
- Nabi, Ikram**  
GLUCOSEPHOSPHATE DEHYDROGENASE DEFICIENCY
- Nabi, Kamran Haji**  
EDUCATION, MEDICAL, CONTINUING
- Nadeau, Mark T.**  
PROFESSIONALISM
- Nadeem, Muhammad**  
HEPATITIS B (epidemiology)
- Nadi, Saba**  
ARBUTIN
- Naeem, Abid**  
TUBERCULOSIS, PULMONARY

- Naidu, Jupalle Nagaiah**  
POLYCYSTIC OVARY SYNDROME
- Naisir, A.**  
EDUCATION, MEDICAL
- Najafabadi, Bent-al-hoda Movahedi**  
BORON (therapeutic uses)
- Najafi, Shamsoulmoulouk**  
AGGREGATIBACTER  
ACTINOMYCETEMCOMITANS
- Najar, Ahmad Gholamhosseinian**  
ASPIRIN (pharmacology)
- Najeeb, Tallat**  
MENIERE DISEASE (drug therapy)
- Najib, Tayyeba**  
HEAT STROKE (diagnosis)
- Nakhaee, Nouzar**  
ASPIRIN (pharmacology)
- Namazi, Soha**  
AMIKACIN (blood)
- Naqvi, Altaf Baqir**  
HEPATITIS C, CHRONIC (therapy)
- Naqvi, Ghazala Raza**  
PHARMACOVIGILANCE
- Naqvi, Nargis Fatima**  
LIVER CIRRHOSIS
- Narenji, Afsane Golkar**  
IN VITRO OOCYTE MATURATION  
TECHNIQUES
- Naseem Ullah**  
ACUTE KIDNEY INJURY (epidemiology)
- Naseh, V.**  
OVARIAN NEOPLASMS (genetics)
- Nasir, L.**  
EDUCATION, MEDICAL
- Nasser, K.**  
MENINGITIS, BACTERIAL (epidemiology)
- Naveed, Safila**  
PHARMACOVIGILANCE
- Nawaz, Arif Amir**  
HEPATITIS C, CHRONIC (therapy)
- Nazar, Zahid**  
SCHIZOPHRENIA (drug therapy)
- Nazari, F.**  
MULTIPLE SCLEROSIS (therapy)
- Nejad, Nahid Ataei**  
VITRIFICATION
- Ngogang, Jeanne Y.**  
ZIKA VIRUS
- Niazi, Saifullah Khan**  
BLOOD DONORS
- Nicholson, Karl G.**  
ORTHOMYXOVIRIDAE
- Nikanfar, Alireza**  
LEUKEMIA, MYELOID, ACUTE
- Nikbakht, H.A.**  
COLORECTAL NEOPLASMS (epidemiology)
- Nikkhah, K.**  
MULTIPLE SCLEROSIS
- Nikkhah, Karim**  
MIGRAINE DISORDERS (drug therapy)
- Nimer, N.A.**  
MICROBIAL SENSITIVITY TESTS
- Nojomi, Marzieh**  
MENTAL DISORDERS (nursing)
- Nokhbatolfoghahaei, Hanieh**  
DENTAL DEBONDING  
LASERS, SOLID-STATE
- Noor, S.K.**  
TUBERCULOSIS (epidemiology)
- Noorafshan, Ali**  
RUBELLA VIRUS
- Noreini, S. Naderi**  
CAMELLIA SINENSIS
- Nourafkan, Ozra**  
PHYSICIANS, FAMILY
- Nouri, Z. Haji Mehdi**  
MYCOPLASMA HOMINIS (isolation and  
purification)
- Noushad, Shamoon**  
OBESITY
- Nowroozzadeh, Mohamed Hossein**  
RETINOPATHY OF PREMATURITY (surgery)
- Nutr, R.**  
POLYCYSTIC OVARY SYNDROME

- Ochoa, Yagdeline R.**  
HAND HYGIENE
- Oftadegan, Somayeh**  
CARUM
- Ohshima, Kenshi'ro**  
MICROBIOTA
- Okuyan, Ertugul**  
VITAMIN D (analogs and derivatives)
- Oliveira, Guilherme Jose Pimentel Lopes de**  
DENTAL SCALING
- Olivier, Catherine W.**  
MENINGOCOCCAL INFECTIONS (epidemiology)
- Olsson, A.C.**  
CARCINOGENS
- Olumi, Saeid**  
TUBERCULOSIS, PULMONARY
- Omer, S.B.**  
IMMUNIZATION
- Omidi Kashani, Farzad**  
SPONDYLOLISTHESIS (surgery)
- Onder, Hasan**  
DENTAL CARIES
- Onsory, Kh**  
MYCOPLASMAHOMINIS (isolation and purification)  
OVARIAN NEOPLASMS (genetics)
- Orakzai, Omer Khan**  
VITREOUS HEMORRHAGE (surgery)
- Orr, M.G.**  
DRUG USERS
- Owen, N.**  
MOTOR ACTIVITY
- Ozcakir, Hasan Tayfun**  
EMBRYO TRANSFER
- Ozden, Hilmi**  
MULTIPLE SCLEROSIS
- Pachani, Nazish Hussain Ali**  
SUBSTANCE-RELATED DISORDERS
- Padhy, Rabindra N.**  
URINARY TRACT INFECTIONS
- Paknejad, Mojgan**  
AGGREGATIBACTER  
ACTINOMYCETEMCOMITANS
- Panaghi, L.**  
CHILD ABUSE
- Panchal, Rekha**  
HEMORRHAGIC FEVER, EBOLA (therapy)
- Pansota, Mubasher Saeed**  
UTERINE RUPTURE
- Paraskevas, George**  
HALLUX VALGUS
- Parikh, Sagar V.**  
EDUCATION, MEDICAL, CONTINUING
- Park, Sanghoon**  
TRACHEAL STENOSIS
- Park, Yong Won**  
TRACHEAL STENOSIS
- Parsaei, Hakimeh**  
HEALTH CARE REFORM
- Pasalar, Parvin**  
TESTOSTERONE
- Passim, Nadia**  
CORONAVIRUS INFECTIONS (therapy)
- Pater , Muzna**  
OBESITY
- Peltre, Gabriel**  
INFERTILITY, FEMALE
- Pereira, Cristiane A.**  
BACCHARIS
- Perl, Irish M.**  
CORONAVIRUS INFECTIONS (transmission)
- Petzl Erler, Maria Luiza**  
LACTASE (genetics)
- Pinotti, Felipe Eduardo**  
DENTAL SCALING
- Pirson, Jean-Yves**  
PNEUMOCOCCAL INFECTIONS (epidemiology)
- Pirwani, Mehtab**  
HIP FRACTURES
- Pisaneschi, Lisa**  
SCALP DERMATOSES (epidemiology)

- Poncet, Pascal**  
INFERTILITY, FEMALE
- Pordel, Edris**  
LASERS, SOLID-STATE
- Pour, Azin Asadollah**  
CERIUM (pharmacology)
- Pouramir, Mahdi**  
ARBUTIN
- Pourmand, Gholamreza**  
VITRIFICATION
- Poursani, Ensieh M.**  
OCTAMER TRANSCRIPTION FACTOR-3
- Poursepanj, Golfam**  
AGGREGATIBACTER  
ACTINOMYCETEMCOMITANS
- Prakash, Ravi**  
TUBERCULOSIS, MULTIDRUG-RESISTANT  
(epidemiology)
- Praptiningsih, Catharina Y.**  
RESPIRATORY TRACT INFECTIONS
- Punhal, Muhammad**  
HELICOBACTER INFECTIONS
- Qamar un Nisa**  
NEURALGIA, POSTHERPETIC
- Qamar, Khadija**  
PROGESTERONE (antagonists and inhibitors)
- Qayyum, Rashid**  
DEPRESSION
- Qazi, Afsheen**  
DIABETES, GESTATIONAL (diagnosis)
- Quinn, C.E.**  
INTENSIVE CARE UNITS, NEONATAL
- Qureshi, Aneela**  
DIABETES, GESTATIONAL (diagnosis)
- Qureshi, Fawed**  
LIVER CIRRHOSIS
- Qureshi, Umar Farooq**  
HEPATITIS B (epidemiology)
- Rady, A.**  
NATIONAL HEALTH PROGRAMS
- Rafieian, M.**  
MORUS
- Rahat, Feisal**  
RETINOPATHY OF PREMATURITY (surgery)
- Rahimi, A.**  
DIAZINON (pharmacology)
- Rahimi, S.**  
DIAZINON (pharmacology)
- Rajaei, M.H.**  
DISASTERS
- Ramalingam, Krishnan**  
POLYCYSTIC OVARY SYNDROME
- Ramezanali, Fariba**  
POLYCYSTIC OVARY SYNDROME
- Ramezani, Amin**  
PRENATAL DIAGNOSIS
- Ramezani, S.**  
PHYSICAL ENDURANCE
- Rana, Atif Iqbal**  
GASTROSTOMY
- Rana, Mowadat Hussain**  
STRESS DISORDERS, POST-TRAUMATIC
- Ranjbaran, Reza**  
PRENATAL DIAGNOSIS
- Rashbrook, Elaine**  
DISASTERS
- Rashid, Amir**  
STAT1 TRANSCRIPTION FACTOR
- Rashid, Asif Zaman**  
DIABETIC FOOT (diagnosis)
- Rauf, Ali**  
GLAUCOMA (pathology)
- Razaghi, Mohammad Reza**  
URINARY BLADDER CALCULI (therapy)
- Razaghi, Zahra**  
MYOFASCIAL PAIN SYNDROMES (therapy)
- Razak, Suhail**  
STAT1 TRANSCRIPTION FACTOR
- Read, Robert C.**  
ORTHOMYXOVIRIDAE
- Rego, Marcos A.**  
BACCHARIS

- Rehman, Mujeeb**  
VENOUS THROMBOSIS
- Reicher, Stephen**  
HEALTH
- Rezaci, S.**  
HEALTHCARE FACILITIES, MANPOWER, AND SERVICES
- Rezaee, Rita**  
LEARNING  
SCHOOLS, MEDICAL  
STUDENTS, MEDICAL
- Rezaianzadeh, Abbas**  
NUTRITION ASSESSMENT
- Riaz, Muhammad Akram**  
DEPRESSION (psychology)
- Riaz, Muhammad Naveed**  
DEPRESSION (psychology)
- Riaz, Rehan**  
MITRAL VALVE STENOSIS
- Rind, Muhammad Salim**  
HEPATITIS C, CHRONIC
- Rodrigues, Gabriel**  
LIVER ABSCESS, AMEBIC (diagnosis)
- Rokni, M.**  
MUSCULOSKELETAL DISEASES (epidemiology)
- Rosberg, Susanne**  
ACCIDENTAL FALLS
- Rose, Angela**  
HEMORRHAGIC FEVER, EBOLA (therapy)
- Roshanzamir, Sharareh**  
SYMPATHETIC NERVOUS SYSTEM
- Rossignol, Jean-Francois**  
CORONAVIRUS INFECTIONS (therapy)
- Rostami, Aram**  
RADIATION-PROTECTIVE AGENTS
- Rouhi, N.**  
DISASTERS
- Roushdy, R.**  
CHILD HEALTH
- Rozbahani, Shahla**  
ACETYLCYSTEINE
- Saad, Walaa**  
BONE DENSITY
- Sabir, Samina**  
PREMATURE BIRTH (prevention and control)
- Sadafiand, S.**  
LANGUAGE TESTS
- Sadaghiani, Mahzad Mehrzad**  
POLYCYSTIC OVARY SYNDROME
- Sadatmahalleh, Shahideh Jahanian**  
ENDOMETRIOSIS (diagnosis)
- Sadatsharifi, Arman**  
AMIKACIN (blood)
- Sadeghi Hashjin, Goudarz**  
SUBSTANCE WITHDRAWAL SYNDROME
- Sadeghi, Kheirollah**  
PSYCHOTHERAPY
- Sadeq, Hussain**  
SEIZURES
- Sadighi, Mohammad A.M.**  
TESTOSTERONE
- Saeed, N.**  
MENINGITIS, BACTERIAL (epidemiology)
- Saeed, Saqib**  
TUBERCULOSIS, PULMONARY (diagnosis)
- Saeed, Shahzad**  
GLAUCOMA (pathology)
- Saeidi, Hojatolah**  
PREIMPLANTATION DIAGNOSIS
- Safaei, Akbar**  
LEUKEMIA, LYMPHOCYTIC, CHRONIC,  
B-CELL (genetics)
- Safarpour, Elham**  
LEVOFLOXACIN (pharmacology)
- Sagheb, Mohammad Mahdi**  
AMIKACIN (blood)
- Sahin, Irfan**  
VITAMIN D (analogs and derivatives)
- Sahli, J.**  
SMOKING (epidemiology)
- Salah, Samia**  
BONE DENSITY



**Salahshoor, Mohammad Reza**  
CAROTENOIDS

**Salam, Arsalan Ahmad**  
TUBERCULOSIS, PULMONARY (diagnosis)

**Saldera, Kausar**  
LIVER CIRRHOSIS

**Saleem, Hassan**  
GASTROSTOMY

**Salehf, Alireza**  
STUDENTS, MEDICAL

**Salehnia, Mojdeh**  
VITRIFICATION

**Salih, Muhammed**  
HEPATITIS C, CHRONIC (therapy)

**Salk, Ismail**  
PELVIS

**Salk, Sultan**  
PELVIS

**Samaan, Gina**  
RESPIRATORY TRACT INFECTIONS

**Samad, Fauzia Abdus**  
COLORECTAL NEOPLASMS

**Samani, Reza Omani**  
SURROGATE MOTHERS

**Samsami, Alamtaj**  
PRENATAL DIAGNOSIS

**Sana Rehman**  
POLIOMYELITIS (prevention and control)  
TUBERCULOSIS, PULMONARY (diagnosis)

**Sanauddin, Noor**  
INTELLECTUAL DISABILITY

**Sangmesh, Mithare**  
PHOTOCHEMOTHERAPY

**Sanlihan, Fatih**  
CERVIX UTERI (pathology)

**Sanyal, Santonu K.**  
DIABETIC FOOT (etiology)

**Sarangi, Rachita**  
URINARY TRACT INFECTIONS

**Saremi, M.**  
MUSCULOSKELETAL DISEASES (epidemiology)

**Sarfraz, Brig Tariq**  
EDUCATION

**Sarkari, Bahador**  
LEISHMANIASIS (etiology)

**Sarwar, Imran**  
RESPIRATORY TRACT INFECTIONS

**Sato, T.**  
FAMILY PLANNING SERVICES

**Satyanarayana, Uppala**  
POLYCYSTIC OVARY SYNDROME

**Sawabe, Toko**  
MICROBIOTA

**Sawabe, Tomoo**  
MICROBIOTA

**Sayeedi, M Mir**  
PHYSICAL ENDURANCE

**Saylan, Aslihan**  
HYALURONIC ACID (pharmacology)

**Scardueli, Cassio Rocha**  
DENTAL SCALING

**Scaria, Joy**  
SALMONELLA ENTERICA (genetics)

**Schuz, J.**  
CARCINOGENS

**Seerwan, Muhammad**  
SULFONAMIDES (pharmacology)

**Seita, A.**  
EDUCATION, MEDICAL

**Selmi, Amina Aitsi**  
DISASTERS

**Sen, Fatih**  
CORONARY ARTERY DISEASE

**Senechal, Helene**  
INFERTILITY, FEMALE

**Senguven, Burcu**  
GRANULOMA, PYOGENIC (therapy)

**Senhaji, M.**  
QUALITY OF LIFE

**Sensoy, Baris**  
CORONARY ARTERY DISEASE

- Serinsoz, Hulya**  
POLYCYSTIC OVARY SYNDROME
- Seyed Javad Mowla**  
GLYCOPROTEINS
- Seyedi, Fatemeh**  
INSULIN (chemical synthesis)
- Shabkhiz, F.**  
PHYSICAL ENDURANCE
- Shadmani, Zahra**  
CHROMOSOMES, HUMAN, PAIR 9
- Shah, Dania A.**  
HEAT STROKE (diagnosis)
- Shah, Muhammad Iqbal**  
HEPATITIS C, CHRONIC
- Shah, Shabana N.**  
PHARMACOVIGILANCE
- Shah, Syed Humayun**  
URINARY TRACT INFECTIONS (etiology)
- Shah, Syed Murad A.N.**  
ACUTE KIDNEY INJURY (epidemiology)
- Shahid, Abdul Razzaq**  
URINARY TRACT INFECTIONS (etiology)
- Shahmohammadi, R.**  
CAMELLIA SINENSIS
- Shahnam, Tariq**  
EYE FOREIGN BODIES (surgery)
- Shahrooz, Rasool**  
PYRUVATES (therapeutic uses)
- Shahryari, Jahanbanoo**  
LEUKEMIA, LYMPHOCYTIC, CHRONIC,  
B-CELL (genetics)
- Shaikh, Aijaz Ahmed**  
VENOUS THROMBOSIS
- Shaikh, Hafeezullah**  
LIVER CIRRHOSIS
- Shaikh, Shazia Sarwar**  
LIVER CIRRHOSIS
- Shaki, Fatemeh**  
CERIUM (pharmacology)
- Shams, A.**  
MULTIPLE SCLEROSIS
- Shariati, M.**  
DIAZINON (pharmacology)
- Shariatzadeh, S.M.A.**  
CAMELLIA SINENSIS
- Sharif, Atif**  
MENIERE DISEASE (drug therapy)
- Sharifi, Fatemeh**  
RETINOPATHY OF PREMATURITY (surgery)
- Sharifzadeh, Gholamreza**  
TUBERCULOSIS, PULMONARY
- Sharifzadeh, Sedigheh**  
PRENATAL DIAGNOSIS
- Sharma, Anjali**  
FACULTY
- Sharma, Apoorv**  
BEZOARS (complications)
- Sharma, Hemlata**  
MALONDIALDEHYDE (blood)
- Shaukat, Asim**  
CAROTID ARTERY DISEASES
- Shaygannejad, V.**  
MULTIPLE SCLEROSIS (therapy)
- Sheba, Hala Fathy**  
BONE DENSITY
- Shehab, Diaa**  
OSTEOARTHRITIS, KNEE
- Sheikh, Muhammad Muneeb**  
TRACHOMA (therapy)
- Sher, Akhtar**  
ACUTE KIDNEY INJURY (epidemiology)
- Sheraz, Motsim**  
OPERATING ROOMS
- Sheridan, William P.**  
HEMORRHAGIC FEVER, EBOLA (therapy)
- Shibl, Atef M.**  
PNEUMOCOCCAL INFECTIONS (epidemiology)
- Shirakura, Maya**  
TOOTH MOVEMENT
- Shiravani, Reza**  
SPONDYLOLISTHESIS (surgery)

- Shirazi, M.**  
LACTOBACILLUS ACIDOPHILUS
- Shirazi, Mandana**  
EDUCATION, MEDICAL, CONTINUING
- Shirazi, Reza**  
PROSTATITIS (drug therapy)
- Shoab Rahim**  
DENTAL CARE
- Shobeiri, Fatemeh**  
HYDATIDIFORM MOLE (epidemiology)
- Shoeibi, Nasser**  
MUSTARD GAS (adverse effects)
- Shojaedin, S.**  
MULTIPLE SCLEROSIS (physiopathology)
- Shokri, Saeid**  
PROSTATITIS (drug therapy)
- Shokrzadeh, Mohammad**  
CERIUM (pharmacology)
- Shoraka, H.R.**  
INFANT MORTALITY
- Showraki, Alireza**  
CARUM
- Shrikhande, Sunanda**  
FACULTY
- Sicvcrdiin, M.**  
CHILD HEALTH
- Siddiq, Masood**  
HEPATITIS C, CHRONIC (therapy)
- Siddique, Wasif**  
OTITIS MEDIA, SUPPURATIVE (therapy)
- Siddiqui, Mehboob Alam**  
RESPIRATORY TRACT INFECTIONS
- Siddiqui, Muhammad Adeel**  
CLOBETASOL (adverse effects)
- Siddiqui, Salma**  
DEPRESSION
- Siddiqui, Shehla**  
PHARMACOVIGILANCE
- Sifton, C.**  
CARCINOGENS
- Sikander, Sihani**  
MALNUTRITION (epidemiology)
- Sinha, M. Tech**  
EPIDERMIS
- Sirin, Duygu Y.**  
STAPHYLOCOCCUS AUREUS
- Sivasubramaniam, P.**  
INTENSIVE CARE UNITS, NEONATAL
- Sofizadeh, A.**  
INFANT MORTALITY
- Soheili, M.**  
MULTIPLE SCLEROSIS (therapy)
- Sohmbizadeh, S.**  
DISASTERS
- Soltanlinejad, Farhad**  
PYRUVATES (therapeutic uses)
- Soltani Bahram M.**  
TRANSFORMING GROWTHFACTORBETA
- Soltani, Bahram Mohammad**  
OCTAMER TRANSCRIPTION FACTOR-3
- Soltani, Behrouz**  
STUDENTS, NURSING
- Soltaniarabshahp, Seyed Kamran**  
EDUCATION, MEDICAL, CONTINUING
- Soltanpour, J.**  
BACTERIAL INFECTIONS (epidemiology)
- Stanekzai, M.R.**  
DRUG USERS
- Stevic, Ruza**  
PANNICULITIS, PERITONEAL (diagnosis)
- Stojakov, Dejan**  
PANNICULITIS, PERITONEAL (diagnosis)
- Storey, Douglas**  
RESPIRATORY TRACT INFECTIONS
- Storms, Aaron D.**  
RESPIRATORY TRACT INFECTIONS
- Straif, K.**  
CARCINOGENS
- Strathdee, S.A.**  
DRUG USERS

- Stroberg, Edana**  
MENINGIOMA (diagnosis)
- Su, Shao-Ching**  
TOOTH MOVEMENT
- Suda, Wataru**  
MICROBIOTA
- Suer, Berkay Tolga**  
ALVEOLAR BONE GRAFTING (methods)
- Sulaiman, A.A.**  
TUBERCULOSIS (epidemiology)
- Sultan, A.M.**  
SALMONELLA ENTERICA (genetics)
- Sultana, Munawar**  
DIABETIC FOOT (etiology)
- Suthar, Ramesh Kumar**  
HEPATITIS C, CHRONIC
- Svantesson, Ulla**  
ACCIDENTAL FALLS
- Syed, Abdus Samad**  
COLORECTAL NEOPLASMS
- Sykes, Lisa K.**  
HEPATITIS B VACCINES
- Tabaie, Seyed Mehdi**  
TRANSPLANTATION
- Tabassum, Arfa**  
GENITAL NEOPLASMS, FEMALE (therapy)
- Tabatabaee, Hamidreza**  
OUTLIERS, DRG
- Tabibi, Narjes**  
LEUKEMIA, LYMPHOCYTIC, CHRONIC,  
B-CELL (genetics)
- Taghavian, Fariba**  
ORGANOPHOSPHATE POISONING
- Taherii, H.**  
MULTIPLE SCLEROSIS
- Tahir, Muhamamd**  
DIABETES COMPLICATIONS
- Tahir, Muhammad**  
ALBUMINURIA (therapy)  
INFERIOR WALL MYOCARDIAL INFARCTION  
(physiopathology)
- Tahir, Muhammad Muzammil**  
SULFONAMIDES (pharmacology)
- Taklimi, Amin Golmohammadi**  
URINARY BLADDER CALCULI (therapy)
- Talaei Khozani, Tahereh**  
MESENCHYMAL STROMAL CELLS
- Talebi, Mehrak**  
ENDOMETRIOSIS (diagnosis)
- Talebzadeh, S.**  
MYCOPLASMAHOMINIS(isolation and  
purification)
- Tam, Jonathan S. Nguyen Van**  
ORTHOMYXOVIRIDAE
- Tambo, Ernest**  
ZIKA VIRUS
- Tamim, Ham M.**  
CORONAVIRUS INFECTIONS
- Tanimoto, Kotaro**  
TOOTH MOVEMENT
- Tara, Mohsen Ghobadi**  
EDUCATION, MEDICAL, CONTINUING
- Tariq, Nadeem**  
TEMPOROMANDIBULAR JOINT DYSFUNCTION  
SYNDROME
- Tasleem, Munazzah**  
COMPUTER COMMUNICATION NETWORKS
- Tasnim, Nasira**  
GENITAL NEOPLASMS, FEMALE (therapy)
- Taubenheim, Brian**  
HEMORRHAGIC FEVER, EBOLA (therapy)
- Tavalae, Marziyeh**  
ACETYLCYSTEINE
- Taylor, Raymond**  
HEMORRHAGIC FEVER, EBOLA (therapy)
- Tayyab Rahman, Daoud**  
RADIOLOGY, INTERVENTIONAL
- Tayyem, R.F.**  
MEALS
- Tekin, Umot**  
ALVEOLAR BONE GRAFTING (methods)
- Titaley, Christiana R.**  
RESPIRATORY TRACT INFECTIONS

- Tiwari, Pramod K.**  
TUBERCULOSIS, MULTIDRUG-RESISTANT  
(epidemiology)
- Todd, C.S.**  
DRUG USERS
- Topal, Salih**  
CORONARY ARTERY DISEASE
- Tsuka, Yuji**  
TOOTH MOVEMENT
- Tufail, Shazia**  
EDUCATION, MEDICAL
- Tunc, Emine Sen**  
DENTAL CARIES
- Turkmen, Simge Bagci**  
CERVIX UTERI (pathology)
- Tuz, Hakan H.**  
ALVEOLAR BONE GRAFTING (methods)
- Tysinger, James**  
PROFESSIONALISM
- Ugrappa, Sridevi**  
PHOTOCHEMOTHERAPY
- Ul Hassan, Wahaj**  
ALBUMINURIA (therapy)
- Ulusoy, Ayca Tuba**  
DENTAL CARIES
- Umar, Shaaray Abrar**  
DEPRESSION (epidemiology)
- Ur Rahman, Mahmood**  
STRESS DISORDERS, POST-TRAUMATIC
- Ur Rehman, Muhammad Matloob**  
NEURALGIA (therapy)
- Uras, P.A.**  
TUBERCULOSIS, MULTIDRUG-RESISTANT  
(diagnosis)
- Urn, Wei S.**  
ORTHOMYXOVIRIDAE
- Uyeki, Timothy M.**  
RESPIRATORY TRACT INFECTIONS
- Vaezi, Gholamhassan**  
ORGANOPHOSPHATE POISONING
- Vakili, Rahim**  
ADRENAL HYPERPLASIA, CONGENITAL  
(diagnosis)
- Valhov, D.**  
DRUG USERS
- Valiani, M.**  
MULTIPLE SCLEROSIS (therapy)
- Valibeigi, Behnaz**  
LEUKEMIA, LYMPHOCYTIC, CHRONIC,  
B-CELL (genetics)
- Varsani, Harsha**  
ORTHOMYXOVIRIDAE
- Vatti, Vikram**  
BEZOARS (complications)
- Vellamchetla, Kiran**  
PHOTOCHEMOTHERAPY
- Velupula, Nagalaxmi**  
PHOTOCHEMOTHERAPY
- Vinayak, Prasad**  
TOBACCO
- Voisine, Jimmy**  
MENINGOCOCCAL INFECTIONS (epidemiology)
- Vojdani, Zahra**  
MESENCHYMAL STROMAL CELLS
- Vojoudi, E.**  
GLYCOCONJUGATES
- Vrettakos, Aristidis**  
HALLUX VALGUS
- Vural, Aylin**  
CERVIX UTERI (pathology)
- Vyas, RK**  
MALONDIALDEHYDE (blood)
- Vyas, Shalini**  
MALONDIALDEHYDE (blood)
- Waheed, Akbar**  
COLISTIN (administration and dosage)
- Waheed, Anam Akbar**  
ABORTION, SPONTANEOUS (therapy)
- Wahid, Zarnaz**  
ECZEMA (diagnosis)
- Wahyuninerum, Yunita**  
RESPIRATORY TRACT INFECTIONS
- Warren, Travis**  
HEMORRHAGIC FEVER, EBOLA (therapy)

**WHO Eastern Mediterranean Regional Office**

CHOLERA VACCINES  
 DENGUE (epidemiology)  
 HEMORRHAGIC FEVERS, VIRAL (epidemiology)  
 MIDDLE EAST RESPIRATORY SYNDROME  
 CORONAVIRUS  
 MENINGITIS (prevention and control)  
 MICROCEPHALY  
 ZIKA VIRUS INFECTION (transmission)  
 ARBOVIRUS INFECTIONS  
 CHOLERA (epidemiology)  
 ZIKA VIRUS INFECTION  
 CORONAVIRUS INFECTIONS (epidemiology)

**Wiemers, Marcy**  
 PROFESSIONALISM

**Willen, Carin**  
 ACCIDENTAL FALLS

**Wise, Helen**  
 ORTHOMYXOVIRIDAE

**Wright, Claire**  
 MENINGOCOCCAL INFECTIONS (epidemiology)

**Yaghmaei, P.**  
 HEPATOLENTICULAR DEGENERATION

**Yaghoobi, Mohammad**  
 URINARY BLADDER CALCULI (therapy)

**Yamini, Nazila**  
 VITRIFICATION

**Yaqub, Mehboob**  
 TOURETTE SYNDROME (etiology)

**Yasmin, Sumaira**  
 PREMATURE BIRTH (prevention and control)

**Yayla, Cagri**  
 CORONARY ARTERY DISEASE

**Yazan, Murude**  
 ALVEOLAR BONE GRAFTING (methods)

**Yazdani, Khalid**  
 GLUCOSEPHOSPHATE DEHYDROGENASE  
 DEFICIENCY

**Yazdanp, Shahram**  
 EDUCATION, MEDICAL

**Yazdanpanah, Abbas**  
 PHYSICIANS, FAMILY

**Yazdkhasti, Fariba**  
 INFERTILITY, FEMALE

**Yelda, Fitra**  
 RESPIRATORY TRACT INFECTIONS

**Yeretzian, J.S.**  
 NATIONAL HEALTH PROGRAMS

**Yildiz, Suleyman Seza**  
 VITAMIN D (analogues and derivatives)

**Yilmaz, Ibrahim**  
 STAPHYLOCOCCUS AUREUS

**Yoon, Seon Bin**  
 TRACHEAL STENOSIS

**Yousefi, H.**  
 DISASTERS

**Zafar, Farya**  
 PHARMACOVIGILANCE

**Zafar, Muhammad Rafiq**  
 NEPHROSTOMY, PERCUTANEOUS

**Zahid, Maham**  
 MALNUTRITION (epidemiology)

**Zahid, Salman**  
 SCHIZOPHRENIA (drug therapy)

**Zahir, Madiha**  
 DENGUE (psychology)

**Zahiroddin, Alireza**  
 MENTAL DISORDERS (nursing)

**Zahiruddin, Quazi Syed**  
 FACULTY

**Zahoor, Farnaz**  
 PREMATURE BIRTH (prevention and control)

**Zaki, Arqam Bakhtyar**  
 AZADIRACHTA

**Zaman, Bushra Sher**  
 UTERINE RUPTURE

**Zamani, S.**  
 LACTOBACILLUS ACIDOPHILUS

**Zambon, Maria**  
 CORONAVIRUS INFECTIONS (therapy)

**Zamiri, M.J.**  
 DIAZINON (pharmacology)

**Zand, Farid**  
 NUTRITION ASSESSMENT

**Zandi, Afsaneh**  
SURROGATE MOTHERS

**Zarep, Zahra**  
STUDENTS, DENTAL

**Zedini, C.**  
SMOKING (epidemiology)

**Zeeshan, N.**  
HEPATITIS C, CHRONIC (therapy)

**Zegeye, Bidir**  
SHIGELLA

**Ziaei, Jamal Eivazi**  
LEUKEMIA, MYELOID, ACUTE

**Znait, A. Taleb**  
INTENSIVE CARE UNITS, NEONATAL

**Zodpey, Sanjay**  
FACULTY

**Zuberi, Bader Faiyaz**  
HEPATITIS C, CHRONIC (therapy)

**Zulfiqar, Tehzeeb**  
MALNUTRITION (epidemiology)

**Appendix II**

**List of EMR Journals Indexed in  
IMEMR**

**(by country)**





Journal	ISSN
<b>Afghanistan (2)</b>	
Afghan Medical Journal	N/A
AFJPH-Afghanistan Journal of Public Health	2308-2895
<b>Bahrain (3)</b>	
Arab Journal for Food and Nutrition	1608-8352
Bahrain Medical Bulletin	1012-8298
JBMS-Journal of the Bahrain Medical Society	1015-6321
<b>Egypt (141)</b>	
AAMJ-AI-Azhar Assiut Medical Journal	1687-1693
African Journal of Urology	1110-5704
Afro-Arab Liver Journal	1687-224X
Ain-Shams Journal of Forensic Medicine and Clinical Toxicology	1687-1030
Ain-Shams Medical Journal	0002-2144
AJAIC-Alexandria Journal of Anaesthesia and Intensive Care	N/A
AJM-Alexandria Journal of Medicine	2090-5068
Al-Azhar Journal of Dental Science	1110-6751
Al-Azhar Medical Journal	1110-0400
Alexandria Dental Journal	1110-015X
Alexandria Journal of Food Science and Technology	1687-3920
Alexandria Journal of Hepatogastroenterology	2090-1879
Alexandria Journal of Pediatrics	1687-9945
Alexandria Journal of Pharmaceutical Sciences	1110-1792
Alexandria Journal of Veterinary Science [AJVS]	1110-2407
Alexandria Medical Journal [The]	0516-5849
Annals of Pediatric Surgery	1687-4137
Applied Endocrinology in Egypt	1110-1776
Arab Family Health and Population	N/A
Arab Journal of Biotechnology	1110-6875
Arab Journal of Gastroenterology	1687-1979
Arab Journal of Laboratory Medicine [The]	1110-1822
ASJOG-Ain-Shams Journal of Obstetrics and Gynecology	1697-2193
ASNJ-Alexandria Scientific Nursing Journal	1687-3858
Assiut Medical Journal	1110-0494
Assiut University Bulletin for Environmental Researches	1110-6107
Assiut Veterinary Medical Journal	N/A

Journal	ISSN
Benha Medical Journal	1110-208X
Bulletin of Alexandria Thoracic Association	1687-997X
Bulletin of Faculty of Pharmacy-Cairo University	1110-0931
Bulletin of Faculty of Physical Therapy-Cairo University	1110-6611
Bulletin of Pharmaceutical Sciences-Assiut University	1110-0052
Bulletin of the Faculty of Science-University of Alexandria	0568-9619
Bulletin of the National Nutrition Institute of the Arab Republic of Egypt	N/A
Bulletin of the National Research Centre	1110-0591
Bulletin of the Ophthalmological Society of Egypt	0078-5342
Childhood and Development Quarterly	1110-8681
Clinical Diabetes	0891-8929
EDJ-Egyptian Dental Journal	0070-9484
Egyptian Heart Journal [The]	1110-2608
Egyptian Journal of Anatomy [The]	1110-2144
Egyptian Journal of Biomedical Engineering	1012-5558
Egyptian Journal of Biophysics and Biomedical Engineering	1110-8525
Egyptian Journal of Breastfeeding	N/A
Egyptian Journal of Bronchology [The]	1687-8426
Egyptian Journal of Cardiothoracic Anesthesia	1687-9090
Egyptian Journal of Cataract and Refractive Surgery [The]	N/A
Egyptian Journal of Chemistry	0449-2285
Egyptian Journal of Chest Diseases and Tuberculosis [The]	0422-7638
Egyptian Journal of Community Medicine [The]	1110-1865
Egyptian Journal of Dermatology and Andrology	1110-7650
Egyptian Journal of Diabetes [The]	N/A
Egyptian Journal of Food Science	1110-0192
Egyptian Journal of Genetics and Cytology	0046-161X
Egyptian Journal of Histology [The]	1110-0559
Egyptian Journal of Hospital Medicine [The]	1687-2002
Egyptian Journal of Immunology [The]	1110-4902
Egyptian Journal of Medical Human Genetics [The]	1110-8630
Egyptian Journal of Medical Laboratory Sciences	1110-5593
Egyptian Journal of Microbiology	0022-2704
Egyptian Journal of Neonatology [The]	1110-8991
Egyptian Journal of Neurology, Psychiatry and Neurosurgery [The]	1110-1083

Journal	ISSN
Egyptian Journal of Nutrition	1687-1235
Egyptian Journal of Nutrition and Health	1687-7950
Egyptian Journal of Occupational Medicine	1110-1881
Egyptian Journal of Otolaryngology [The]	1012-5574
Egyptian Journal of Paediatrics [The]	1687-1677
Egyptian Journal of Pediatric Allergy and Immunology [The]	1687-1642
Egyptian Journal of Pharmaceutical Sciences	0301-5068
Egyptian Journal of Physiological Sciences	0301-8660
Egyptian Journal of Psychiatry [The]	1110-1105
Egyptian Journal of Schistosomiasis and Infectious and Endemic Diseases	1110-7278
Egyptian Journal of Surgery [The]	1110-1121
Egyptian Journal of Urology	1110-5712
Egyptian Journal of Veterinary Science	1110-0222
Egyptian Liver Journal	2090-6218
Egyptian Medical Journal of the National Research Center	1687-1278
Egyptian Orthodontic Journal	1110-435x
Egyptian Orthopaedic Journal [The]	1110-1148
Egyptian Pharmaceutical Journal [National Research Center]	1687-4315
Egyptian Population and Family Planning Review [The]	1110-1156
Egyptian Rheumatologist [The]	1110-1164
Egyptian Rheumatology and Rehabilitation	1110-161X
Egyptian Science Magazine [The]	1687-3815
EJB-Egyptian Journal of Biochemistry and Molecular Biology [The]	1687-1502
EJENTAS-Egyptian Journal of ENT and Allied Sciences	2090-0740
EJMM-Egyptian Journal of Medical Microbiology [The]	1110-2179
EMHJ-Eastern Mediterranean Health Journal	1020-3397
Gazette of the Egyptian Paediatric Association [The]	1110-6638
Health Services Journal of the Eastern Mediterreanean Region	1014-9899
JESN-Journal of Egyptian Society of Nephrology [The]	N/A
Journal of Advanced Research	2090-1232
Journal of Childhood Studies	2090-0619
Journal of Drug Research of Egypt	0085-2406
Journal of Hepatology, Gastroenterology and Infectious Diseases	1110-0796
Journal of High Institute of Public Health [The]	2357-0601
Journal of Legal Medicine and Forensic Sciences [The]	1110-6468

Journal	ISSN
Journal of the Arab Society for Medical Research	1687-4293
Journal of the Egyptian Medical Association [The]	0013-2411
Journal of the Egyptian National Cancer Institute	1110-0362
Journal of the Egyptian Public Health Association [The]	0013-2446
Journal of the Egyptian Society of Endocrinology, Metabolism and Diabetes [The]	1110-1245
Journal of the Egyptian Society of Obstetrics and Gynecology [The]	0258-3216
Journal of the Egyptian Society of Parasitology	1110-0583
Journal of the Egyptian Society of Pharmacology and Experimental Therapeutics [The]	N/A
Journal of the Egyptian Society of Toxicology	1110-127X
Journal of the Medical Research Institute-Alexandria University	1110-0133
JPC-Journal of Pediatric Club [The]	N/A
Kasr El Aini Journal of Surgery	0022-9237
Kasr El-Aini Medical Journal	N/A
Kidney Forum	1369-3050
Mansoura Journal of Pharmaceutical Sciences	1110-1318
Mansoura Medical Bulletin	1012-5590
Mansoura Medical Journal	1110-211X
MDV-Molecular Diagnosis and Vaccine	1687-2010
Medical Journal of Ahmed Maher Teaching Hospital [The]	N/A
Medical Journal of Cairo University [The]	0045-3803
Medical Journal of Teaching Hospitals and Institutes [The]	1110-2039
Minoufia Medical Journal	1110-2098
MJFCT-Mansoura Journal of Forensic Medicine and Clinical Toxicology	1110-5437
Neonatology	1687-0492
New Egyptian Journal of Medicine [The]	1110-1946
Pan Arab Journal of Orthopaedic and Trauma [The]	1607-4912
Population Researches and Studies	0255-898X
Population Sciences	N/A
Population Studies	1110-1342
PUJ-Parasitologists United Journal	1687-7942
Scientific Journal of Al-Azhar Medical Faculty [Girls] [The]	1110-2381
Scientific Journal of El-Minia Faculty of Medicine [The]	1110-2446
Scientific Medical Journal	1110-5607
Sohag Medical Journal	1110-7529
South Valley Medical Journal	1110-7529

Journal	ISSN
Suez Canal University Medical Journal	1110-6999
Tanta Medical Journal	1110-1415
Tanta Medical Sciences Journal	1687-5788
Veterinary Medical Journal	1110-1423
Weekly Epidemiology Monitor	2224-4220
Zagazig Journal of Forensic Medicine and Toxicology	1687-160X
Zagazig Journal of Pharmaceutical Sciences	1110-5089
Zagazig Medical Association Journal	1110-2322
Zagazig University Medical Journal	1110-1431
<b>Iraq (32)</b>	
Al-Kindy College Medical Journal	1810-9543
Almustansiriya Journal of Pharmaceutical Sciences	1815-0993
Annals of the College of Medicine-Mosul	0028-1446
Basrah Journal of Surgery	1683-3589
Bulletin of Endemic Disease-Baghdad	0007-4845
DMJ-Dohuk Medical Journal	2071-7326
IMJ-Iraqi Medical Journal	0304-4564
IOJ-Iraqi Orthodontic Journal	1816-0581
IPMJ-Iraqi Postgraduate Medical Journal	1608-8360
Iraqi Army Medical Journal	N/A
Iraqi Journal of Agriculture	1818-6645
Iraqi Journal of Biotechnology	N/A
Iraqi Journal of Community Medicine	1684-5382
Iraqi Journal of Medical Sciences	1681-6579
Iraqi Journal of Microbiology	N/A
Iraqi Journal of Pharmaceutical Sciences	1683-3597
Iraqi Journal of Tropical Disease Researches	1814-0823
Iraqi New Medical Journal	2409-5931
Journal of Baghdad College of Dentistry	1680-0057
Journal of Basic Medical Sciences	N/A
Journal of Community Medicine	N/A
Journal of Contemporary Medical Sciences	2415-1629
Journal of Dohuk University	1812-7568
Journal of Karbala University	1813-0410
Journal of the Faculty of Medicine-Baghdad	0041-9419

Journal	ISSN
Kufa Medical Journal	N/A
Medical Journal of Basrah University [The]	0253-0759
Medical Journal of Tikrit University [The]	N/A
New Iraqi Journal of Medicine [The]	1817-5562
Risafa Medical Journal	N/A
Scientific Nursing Journal	1812-2388
Zanco Journal of Medical Sciences	1995-5588
<b>Islamic Republic of Iran (255)</b>	
ABJS-Archives of Bone and Joint Surgery [The]	2345-4644
Acta Medica Iranica	0044-6025
Advances in Cognitive Science	1561-4174
AJMB-Avicenna Journal of Medical Biotechnology	2008-2835
Anatomical Sciences Journal [ASJ]	N/A
Anesthesiology and Pain Medicine	2228-7523
Annals of Military and Health Sciences Research	2383-1960
Applied Food Biotechnology	2345-5357
Archive of Breast Cancer	2383-0425
Archives of Clinical Infectious Diseases	2641-2345
Archives of Iranian Medicine	1029-2977
Archives of Trauma Research	2251-953X
Armaghane-danesh	1728-6506
ARYA Atherosclerosis Journal	1735-3955
Asia Oceania Journal of Nuclear Medicine and Biology	2322-5718
Asian Journal of Sports Medicine	2008-000X
Audiology	1735-1936
Avicenna Journal of Phytomedicine [AJP]	2228-7930
Basic and Clinical Neuroscience	2008-126X
BCCR-Basic and Clinical Cancer Research	2228-6527
BEAT-Bulletin of Emergency and Trauma	2322-2522
Bina Journal of Ophthalmology	1026-6399
Caspian Journal of Neurological Sciences	2383-4307
Cell Journal [Yakhteh]	2228-5806
Community Health	2386-3033
DARU-Journal of Pharmaceutical Sciences	1560-8115
DENA-Quarterly Journal of Yasuj Faculty of Nursing and Midwifery	1735-8450

Journal	ISSN
Dermatology and Cosmetic Quarterly	2008-7470
DRJ-Dental Research Journal	1735-3327
EBNESINA-Medical Journal of Military Medicine [The]	1735-9503
Emergency	2345-4563
Endovascular Journal	2008-1812
Environmental Health Engineering and Management Journal	2423-3765
Feyz-Journal of Kashan University of Medical Sciences	1029-7855
Frontiers in Biomedical Technologies	2345-5829
Gastroenterology and Hepatology from Bed to Bench	2010-2258
Genetics in the 3rd Millennium	2423-7159
Govaresh	1560-7186
HAKIM Research Journal	1561-252X
HAYAT-Journal of Faculty of Nursing and Midwifery [The]	1735-2215
Health in Emergencies and Disasters Quarterly [HDQ]	N/A
Health Information Management	1735-7853
Hepatitis Monthly	1735-143X
Homa-ye-Salamat	2008-2002
Hormozgan Medical Journal	1735-2223
Hospital-Journal of Iranian Scientific Hospital Association	2008-1928
IBJ-Iranian Biomedical Journal	1028-852X
IEJ-Iranian Endodontic Journal	1735-7497
IHJ-Iranian Heart Journal	1735-7306
IJBC-Iranian Journal of Blood and Cancer	2008-4595
IJB-Iranian Journal of Biotechnology	1728-3043
IJCBNM-International Journal of Community Based Nursing and Midwifery	2322-2476
IJCN-Iranian Journal of Child Neurology	1735-4668
IJDO-Iranian Journal of Diabetes and Obesity	2008-6792
IJEM-Iranian Journal of Endocrinology and Metabolism	1683-4844
IJFS-International Journal of Fertility and Sterility	2008-076X
IJHOSCR-International Journal of Hematology-Oncology and Stem Cell Research	2008-2207
IJHPM-International Journal of Health Policy and Management	N/A
IJHS-Iranian Journal of Health Sciences	2322-553X
IJI-Iranian Journal of Immunology	1735-1383
IJKD-Iranian Journal of Kidney Diseases	1735-8582
IJMCM-International Journal of Molecular and Cellular Medicine	2251-9637



Journal	ISSN
IJME-Iranian Journal of Medical Education	1608-9359
IJM-Iranian Journal of Microbiology	2008-3289
IJMS-Iranian Journal of Medical Sciences	0253-0716
IJN-Iranian Journal of Neonatology	2251-7510
IJOH-International Journal of Occupational Hygiene	2008-5109
IJO-Iranian Journal of Orthodontics	1735-5087
IJP-International Journal of Pediatrics	2345-5047
IJPM-International Journal of Preventive Medicine	2008-7802
IJPR-Iranian Journal of Pharmaceutical Research	1735-0328
IJRM-International Journal of Reproductive Biomedicine	2476-4108
IJVM-Iranian Journal of Veterinary Medicine	2251-8894
International Cardiovascular Research Journal	2251-9130
International Journal of Endocrinology and Metabolism	1726-913X
International Journal of Environmental Research	1735-6865
International Journal of Environmental Science and Technology	1735-1472
International Journal of High Risk Behaviors and Addiction	2251-8711
International Journal of Mycobacteriology	2212-5531
International Journal of Occupational and Environmental Medicine	2008-6520
International Journal of Organ Transplantation Medicine	2008-6490
International Journal of Radiation Research	2322-3243
International Journal of Women's Health and Reproduction Sciences	N/A
Iran Journal of Nursing	2008-5923
Iran Occupational Health	1735-5133
Iranian Journal of Allergy, Asthma and Immunology	1735-1502
Iranian Journal of Arthropod-Borne Diseases	1735-7179
Iranian Journal of Basic Medical Sciences	2008-3866
Iranian Journal of Cancer Prevention	2008-2398
Iranian Journal of Dermatology	0021-082X
Iranian Journal of Diabetes and Lipid Disorders	1726-7544
Iranian Journal of Emergency Medicine	N/A
Iranian Journal of Environmental Health Science and Engineering	1735-1979
Iranian Journal of Epidemiology	1735-7489
Iranian Journal of Health and Environment	2008-2029
Iranian Journal of Medical Microbiology	1735-8612
Iranian Journal of Medical Physics	1735-160X

Journal	ISSN
Iranian Journal of Nuclear Medicine	1681-2824
Iranian Journal of Nursing and Midwifery Research [IJNMR]	1735-9066
Iranian Journal of Nursing Research	1735-7012
Iranian Journal of Nutrition Sciences and Food Technology	1735-7756
Iranian Journal of Obstetric, Gynecology and Infertility [The]	1680-2993
Iranian Journal of Ophthalmology	1735-4153
Iranian Journal of Otorhinolaryngology	1560-1293
Iranian Journal of Parasitology	1735-7020
Iranian Journal of Pediatrics	2008-2142
Iranian Journal of Psychiatric Nursing	2345-2501
Iranian Journal of Psychiatry	1735-4587
Iranian Journal of Psychiatry and Behavioral Sciences	1735-8639
Iranian Journal of Psychiatry and Clinical Psychology [ANDEESHEH VA RAFTAR]	1735-4315
Iranian Journal of Public Health	0304-4556
Iranian Journal of Radiology	1735-1065
Iranian Journal of Veterinary Research	1728-1997
Iranian Rehabilitation Journal	1735-3602
JBUMS-Journal of Babol University of Medical Sciences	1561-4107
JCR-Journal of Craniomaxillofacial Research	5489-2345
JCVTR-Journal of Cardiovascular and Thoracic Research	2008-5117
JDB-Journal of Dental Biomaterials	2383-3971
JDT-Journal of Dentistry Tehran University of Medical Sciences	1735-2150
JFH-Journal of Fasting and Health	N/A
JMB-Journal of Medical Bacteriology	2251-8649
JMRH-Journal of Midwifery and Reproductive Health	N/A
JMR-Journal of Medical Research	1728-1962
JNE-Journal of Nursing Education	3812-2322
JNMS-Journal of Nursing and Midwifery Sciences	2345-5756
JNP-Journal of Nephropathology	2251-8363
Journal of Advances in Medical Education and Professionalism	2322-2220
Journal of Anesthesiology and Pain	2228-6659
Journal of Arak University of Medical Sciences-Rahavard Danesh	1735-5338
Journal of Birjand University of Medical Sciences	N/A
Journal of Cardio-Thoracic Medicine	2345-2447
Journal of Client-Centered Nursing Care	N/A

Journal	ISSN
Journal of Clinical Excellence	2322-391X
Journal of Dental Materials and Techniques	2322-4150
Journal of Dental Medicine-Tehran University of Medical Sciences	1024-641X
Journal of Dental Research, Dental Clinics, Dental Prospects	2008-210X
Journal of Dental School-Shahid Beheshti University of Medical Sciences	1735-7683
Journal of Dentistry-Shiraz University of Medical Sciences	1728-3426
Journal of Environmental Studies	1025-8620
Journal of Family and Reproductive Health	1735-8949
Journal of Fundamentals of Mental Health [The]	1028-6918
Journal of Gorgan University of Medical Sciences	1562-4765
Journal of Guilan University of Medical Sciences	2008-4048
Journal of Health Administration	2008-1200
Journal of Health and Safety at Work	2251-807X
Journal of Health Management and Informatics [JHMI]	2322-1097
Journal of Health Promotion Management [JHPM]	2251-8614
Journal of Health Sciences and Surveillance System	2345-2218
Journal of Health Scope	2251-8959
Journal of Hearing Sciences and Otolaryngology	N/A
Journal of Hygiene and Health	1735-2363
Journal of Injury and Violence Research	2008-2053
Journal of Isfahan Dental School	1735-255X
Journal of Isfahan Medical School	1027-7595
Journal of Islamic Dental Association of Iran [The]-JIDA	1024-6428
Journal of Jahrom University of Medical Sciences	2008-7993
Journal of Kerman University of Medical Sciences	1023-9510
Journal of Kermanshah University of Medical Sciences [KUMS]	2251-9068
Journal of Lasers in Medical Sciences	2008-9783
Journal of Mashhad Dental School	1560-9286
Journal of Mazandaran University of Medical Sciences	1735-9260
Journal of Medical Council of Islamic Republic of Iran	1562-1073
Journal of Medical Education	1735-3998
Journal of Medicinal Plants	1684-0240
Journal of Minimally Invasive Surgical Sciences	2251-7022
Journal of Modern Medical Information Science	N/A
Journal of Modern Rehabilitation	2008-2576

Journal	ISSN
Journal of Neyshabur University of Medical Sciences	2383-3203
Journal of Nursing and Midwifery Quarterly-Shaheed Beheshti University of Medical Sciences and Health Services	1605-8941
Journal of Ophthalmic and Vision Research	2008-2010
Journal of Paramedical Sciences and Rehabilitation	2322-5238
Journal of Patient Safety and Quality Improvement	2345-4482
Journal of Periodontology and Implant Dentistry	2008-7748
Journal of Practice in Clinical Psychology	2423-5822
Journal of Preventive Medicine	N/A
Journal of Qazvin University of Medical Sciences [The]	1561-3666
Journal of Rafsanjan University of Medical Sciences	1735-3165
Journal of Rehabilitation	1607-2960
Journal of Rehabilitation Sciences and Research [JRSR]	2345-6167
Journal of Reproduction and Infertility	2228-5482
Journal of Research in Behavioural Sciences	1735-2029
Journal of Research in Dental Sciences	2008-4676
Journal of Research in Health Sciences [JRHS]	2228-7795
Journal of Research in Medical Sciences	1735-5311
Journal of Research on History of Medicine [The]	N/A
Journal of Sabzevar University of Medical Sciences	1606-7487
Journal of Safety Promotion and Injury Prevention	2345-2455
Journal of School of Public Health and Institute of Public Health Research	1735-7586
Journal of Screening and Geographical Medicine	1735-7594
Journal of Shaheed Sadoughi University of Medical Sciences and Health Services	1562-272X
Journal of Shahrekord University of Medical Sciences	1735-1448
Journal of Student Research Committee [BEYHAGH]	2008-0328
Journal of Tehran University Heart Center [The]	1735-8620
Journal of Veterinary Research	2008-2525
Journal of Zahedan University of Medical Sciences and Health Services	1735-076X
Journal of Zanjan University of Medical Sciences and Health Services	1606-9366
JPC-Journal of Pharmaceutical Care	2322-4630
JPN-Journal of Pediatric Nephrology	N/A
JRH-Journal of Research and Health	2251-6395
JRMS-Journal of Research in Medical Sciences	1735-1995
JRRS-Journal of Research in Rehabilitation Sciences	1735-7519
Jundishapur Journal of Microbiology [JJM]	2008-3645

Journal	ISSN
Jundishapur Journal of Natural Pharmaceutical Products	1735-7780
Jundishapur Scientific Medical Journal	2252-052x
KOOMESH-Journal of Semnan University of Medical Sciences	1608-7046
Medical Journal of Mashad University of Medical Sciences	1735-4013
Medical Journal of Tabriz University of Medical Sciences and Health Services	1608-5671
Medical Journal of the Islamic Republic of Iran	1016-1430
Medical Laboratory Journal	1735-9007
Medical Sciences Journal of Islamic Azad University	1023-5922
Medical-Surgical Nursing Journal	2322-178X
MEJC-Middle East Journal of Cancer	2008-6709
Middle East Journal of Digestive Diseases	2008-5230
Modares Journal of Medical Sciences, Pathobiology	1562-9554
Nanomedicine Journal	2322-3049
Nephro-Urology Monthly	2251-7006
Novelty in Biomedicine	2345-3346
Nursing and Midwifery Research	1753-5001
Nursing Practice Today	2383-1154
Nutrition and Food Sciences Research	2383-0441
Ofogh-E-Danesh	1735-1855
Payavard-Salamat	1735-8132
Payesh-Health Monitor	1680-7626
Pejouhandeh: Bimonthly Research Journal	1735-1022
Physical Treatments: Specific Physical Therapy Journal	2423-5830
Qom University of Medical Sciences Journal	1735-7799
Quarterly Journal of Medical Ethics	2008-4374
Quarterly Journal of Medical Law	N/A
Quarterly Scientific Journal of Relief and Rescue	2008-4544
Razi Journal of Medical Sciences	2228-7043
Reports of Radiotherapy and Oncology	2345-3192
Research in Cardiovascular Medicine	2251-9572
Reviews in Clinical Medicine [RCM]	2345-6256
RMM-Research in Molecular Medicine	2322-1348
Sadra Medical Sciences Journal	N/A
Salmand-Iranian Journal of Aging	1735-806X
Scientific and Research Journal of Army University of Medical Sciences-JAUMS	1727-1789

Journal	ISSN
Scientific Journal of Forensic Medicine	1027-1457
Scientific Journal of Iranian Blood Transfusion Organization [The]	1027-9520
Scientific Journal of Kurdistan University of Medical Sciences	1560-652X
Shenakht Journal of Psychology and Psychiatry	N/A
Social Determinants of Health	2423-3560
Social Welfare Quarterly	1735-8191
Strides in Development of Medical Education	1735-4242
Tanaffos	1735-0344
Teb Va Tazkie	1608-2397
Tehran University Medical Journal [TUMJ]	1683-1764
Thrita Student Journal of Medical Sciences	2251-8312
TIPS-Trends in Pharmaceutical Sciences	2423-3722
Toloo-e-Behdasht	1728-5127
Trauma Monthly	2251-7464
Urology Journal	1735-1308
WJPS-World Journal of Plastic Surgery	2228-7914
Yafteh Journal	1563-0773
Zahedan Journal of Research in Medical Sciences	N/A
<b>Jordan (9)</b>	
Arab Journal of Psychiatry [The]	1016-8923
Dirasat	1026-3764
Jordan Journal of Pharmaceutical Sciences	1995-7157
Jordan Medical Journal	0446-9283
Journal of the Royal Medical Services	2078-8703
Medical Journal of Islamic World Academy of Sciences	1016-3360
Pan Arab Medical Journal	N/A
Population Bulletin of ESCWA	0258-1914
Smile Dental Journal	2072-473X
<b>Kuwait (6)</b>	
Bulletin of Nutrition and Food	N/A
Bulletin of the Kuwait Institute for Medical Specialization	N/A
GJO-Gulf Journal of Oncology [The]	2078-2101
KMJ-Kuwait Medical Journal	0023-5776
Medical Arabization	N/A
Medical Principles and Practice	1011-7571

Journal	ISSN
<b>Lebanon (11)</b>	
ACES-Actualites Cliniques et Scientifiques	1683-8068
AJU-Arab Journal of Urology	2090-598X
Arab Dental Journal	N/A
IAJD-International Arab Journal of Dentistry	2218-0885
JLDA-Journal of the Lebanese Dental Association	1810-9632
Journal of the Arab Neonatology Forum	1812-1756
Lebanese Science Journal	1561-3410
LMJ-Lebanese Medical Journal	0023-9852
Middle East Journal of Anesthesiology	0544-0440
Middle East Journal of Family Medicine	N/A
MJEM- Mediterranean Journal of Emergency Medicine	2222-9442
<b>Libya (6)</b>	
DMJ-Derna Medical Journal	N/A
Garyounis Medical Journal	0254-7198
JMJ-Jamahiriya Medical Journal	2079-1216
Libyan Journal of Infectious Diseases [The]	N/A
LJM-Libyan Journal of Medicine	1993-2820
Tabib Attifil Alarabi	N/A
<b>Morocco (7)</b>	
Bulletin Epidemiologique	0851-8238
ISESCO Journal of Science and Technology	2028-8077
Journal du Practicien	1113-5667
Maroc Medical	0253-4053
Revue Marocaine de Chirurgie Orthopedique et Traumatologique	N/A
Revue Marocaine de Medecine et Sante	0251-0758
Revue Marocaine des Maladies de L'Enfant	N/A
<b>Oman (3)</b>	
Oman Journal of Ophthalmology	0974-620X
Oman Medical Journal	1999-768X
SQUMJ-Sultan Qaboos University Medical Journal	2075-051X
<b>Pakistan (92)</b>	
Al-Shifa Journal of Ophthalmology	1990-3863
Anaesthesia, Pain and Intensive Care	1607-8322
Annals Abbassi Shaheed Hospital and Karachi Medical and Dental College	1563-3241

Journal	ISSN
Annals of Jinnah Postgraduate Medical Centre - Karachi	N/A
Annals of King Edward Medical College	1684-6680
APMC-Annals of Punjab Medical College	2077-9143
Bahria Journal of Professional Psychology	1816-0840
Baqai Journal of Health Sciences	2313-4423
Biomedica	1992-4852
Challenge-Quarterly [The]	0528-7944
Community Medicine	0301-7265
Diabetes Digest	1369-7501
Esculapio	2309-3080
FWU Journal of Social Sciences	1995-1272
GJMS-Gomal Journal of Medical Sciences	1819-7973
Hamdard Medicus	0250-7188
Health [The]	2218-3299
IJEHSR-International Journal of Endorsing Health Science Research	2307-3748
Infectious Diseases Journal of Pakistan	1027-0299
International Journal of Pathology	1810-0155
International Journal of Women Empowerment	2413-4252
Isra Medical Journal	2073-8285
JAMC-Journal of Ayub Medical College-Abbotabad-Pakistan	1025-9589
JCPSP-Journal of the College of Physicians and Surgeons Pakistan	1022-386X
JDUHS-Journal of the Dow University of Health Sciences	1995-2198
JIIMC-Journal of Islamic International Medical College [The]	1815-4018
JIMDC-Journal of Islamabad Medical and Dental College	2227-3875
JKCD-Journal of Khyber College of Dentistry	2220-2633
JLUMHS-Journal of the Liaquat University of Medical Health Sciences	1729-0341
JOPDAK-Journal of the Pakistan Dental Association Karachi	1680-2292
Journal of Basic and Applied Sciences	1814-8085
Journal of Medical Sciences	1682-4474
Journal of Medical Sciences	1997-3438
Journal of Medical Students	N/A
Journal of Nephrology Urology and Transplantation	1606-9331
Journal of Sheikh Zayed Medical College [JSZMC]	2078-8274
Journal of Surgery [The]	1681-4517
Journal of the Pakistan Prosthodontics Association [JPPA]	2308-8613



Journal	ISSN
JPAD-Journal of Pakistan Association of Dermatologists	1560-9014
JPDA-Journal of the Pakistan Dental Association	1680-2292
JPIMS-Journal of Pakistan Institute of Medical Sciences	1683-6928
JPMA-Journal of Pakistan Medical Association	0030-9982
JPMI-Journal of Postgraduate Medical Institute	1013-5472
JPPS-Journal of Pakistan Psychiatric Society	1726-8710
JSOGP-Journal of the Society of Obstetricians and Gynaecologists of Paksitan	N/A
JSP-Journal of Surgery Pakistan International	1817-0242
KMUJ-Khyber Medical University Journal	2072-7763
Lahore Journal of Public Health	N/A
Medical Channel	1681-5491
Medical Forum Monthly	1029-385X
Medical Spectrum [The]	0254-8534
Medicine Today	1813-9876
Mother and Child	0379-2617
NUST Journal of Natural Sciences-NJNS	2072-4659
PAFMJ-Pakistan Armed Forces Medical Journal	0030-9648
Pakistan Heart Journal	0048-2706
Pakistan Journal of Biochemistry	0300-8185
Pakistan Journal of Chest Medicine	N/A
Pakistan Journal of Clinical Psychology	1019-438X
Pakistan Journal of Community Medicine [The]	N/A
Pakistan Journal of Health	0030-9834
Pakistan Journal of Medical and Health Sciences	1996-7195
Pakistan Journal of Medical Ethics	N/A
Pakistan Journal of Medical Sciences	1682-024X
Pakistan Journal of Medicine and Dentistry	2308-2593
Pakistan Journal of Neurological Sciences	1990-6269
Pakistan Journal of Neurology	1990-6269
Pakistan Journal of Obstetrics and Gynaecology	N/A
Pakistan Journal of Orthodontics, Pediatric and Community Dentistry	1608-134X
Pakistan Journal of Otolaryngology-Head and Neck Surgery	0257-4985
Pakistan Journal of Pathology	1024-6193
Pakistan Journal of Pharmaceutical Sciences	1011-601X
Pakistan Journal of Pharmacology	0255-7088

Journal	ISSN
Pakistan Journal of Physiology	1819-270X
Pakistan Journal of Psychology	0030-9869
Pakistan Journal of Scientific and Industrial Research	0030-9885
Pakistan Journal of Scientific and Industrial Research Series A: Physical Sciences	2221-6413
Pakistan Journal of Scientific and Industrial Research Series B: Biological Sciences	2221-6421
Pakistan Medical Journal	0031-000X
Pakistan Ophthalmology	0259-3661
Pakistan Oral and Dental Journal	1012-8700
Pakistan Pediatric Journal	0304-4904
PJC-Pakistan Journal of Cardiology	1016-1244
PJMR-Pakistan Journal of Medical Research	0030-9842
PJO-Pakistan Journal of Ophthalmology	0886-3067
PJPH-Pakistan Journal of Public Health	2225-0891
PJR-Pakistan Journal of Radiology	1607-2006
PJS-Pakistan Journal of Surgery	0258-8552
POJ-Pakistan Orthodontic Journal	2074-0069
Proceedings-Shaikh Zayed Postgraduate Medical Institute	N/A
Professional Medical Journal-Quarterly [The]	1024-8919
RMJ-Rawal Medical Journal	0303-5212
<b>Palestine (3)</b>	
Al-Quds Medical Journal	N/A
Annals of Alquds Medicine	1815-2635
PMJ-Palestinian Medical Journal	N/A
<b>Qatar (4)</b>	
Gulf Journal of Dermatology and Venereology [The]	N/A
Heart Views	1995-705X
JEMTAC-Journal of Emergency Medicine, Trauma and Acute Care	1999-7086
Qatar Medical Journal	0253-8253
<b>Saudi Arabia (31)</b>	
Annals of Saudi Medicine	0256-4947
Annals of Thoracic Medicine	1817-1737
Hematology, Oncology and Stem Cell Therapy	1658-3876
International Journal of Diabetes Mellitus	1877-5934
International Journal of Health Sciences	1658-3639
Journal of Epidemiology and Global Health	2210-6006

Journal	ISSN
Journal of Family and Community Medicine	2230-8229
Journal of Health Specialties [JHS]	1658-600X
Journal of Infection and Public Health	1876-0341
Journal of King Abdulaziz University-Medical Sciences	1319-1004
Journal of Taibah University Medical Sciences	1658-3612
Journal of the Saudi Heart Association	1016-7315
MEAJO-Middle East African Journal of Ophthalmology	0974-9233
Neurosciences	1319-6138
Pan Arab Journal of Neurosurgery	1319-6995
Rehabilitation International	N/A
Research Centre Bulletin	1019-5335
Saudi Epidemiology Bulletin	1319-3965
Saudi Heart Journal	1018-077X
Saudi Journal of Disability and Rehabilitation	1319-6499
Saudi Journal of Gastroenterology [The]	1319-3767
Saudi Journal of Medicine and Medical Sciences [SJMMMS]	1658-631X
Saudi Journal of Oto-Rhino-Laryngology Head and Neck Surgery [The]	1319-8491
Saudi Journal of Sports Medicine [The]	1319-6308
Saudi Medical Journal	0379-5284
SDJ-Saudi Dental Journal [The]	1013-9052
SGH Medical Journal	1658-2489
SJA-Saudi Journal of Anaesthesia	1658-354X
SJO-Saudi Journal of Ophthalmology	1319-4534
SPJ-Saudi Pharmaceutical Journal	1319-0164
Urology Annals	0974-7796
<b>Sudan (10)</b>	
AJNT-Arab Journal of Nephrology and Transplantation	1858-554X
Gezira Journal of Health Sciences	1810-5386
JMJ-Juba Medical Journal	N/A
Khartoum Pharmacy Journal	1816-5168
Omdurman Journal of Pharmaceutical Sciences	N/A
SJPH-Sudanese Journal of Public Health	1990-7567
Sudan Journal of Medical Sciences	1858-5051
Sudan Medical Journal	0491-4481
Sudan Medical Monitor	1858-5000

Journal	ISSN
Sudanese Journal of Dermatology	1815-3941
<b>Syrian Arab Republic (10)</b>	
Arab Journal of Pharmaceutical Sciences	1683-0369
Arabic Journal of Forensic Medicine and Criminal Science	N/A
Arabic Medical Journal	N/A
Damascus University Journal for Health Sciences	2072-2265
JABHS-Journal of the Arab Board of Health Specializations	1561-0217
JISHIM-Journal of the International Society for the History of Islamic Medicine	1303-667X
Journal of Clinical Laboratory [The]	1814-411X
Journal of the Arab Board of Medical Specializations	1561-0217
Journal of the Arab Dentist	N/A
Research Journal of Aleppo University-Medical Sciences Series	N/A
<b>Tunisia (9)</b>	
Archives de l'Institut Pasteur de Tunis	0020-2509
Cahiers Medicaux de Tunisie	0300-5291
IDEES-Revue de Perfectionnement Medical et Paramedical	N/A
Maghreb Medical	0330-258X
Revue Maghrebine de Pediatrie [La]	0330-7611
Revue Maghrebine d'Endocrinologie-Diabete et de Reproduction [La]	N/A
Revue Tunisienne d'Infectiologie	1737-8958
SST-Sante et Securite au Travail	N/A
Tunisie Medicale [La]	0041-4131
<b>United Arab Emirates (5)</b>	
EMJ-Emirates Medical Journal	0250-6882
Gulf Medical University: Proceedings	2306-6865
HMJ-Hamdan Medical Journal	2227-2437
International Journal of Diabetes and Metabolism	1606-7754
IRCMJ-Iranian Red Crescent Medical Journal	1561-4395
<b>Yemen (8)</b>	
HJMS-Hadramout Journal of Medical Sciences	2224-1806
Journal of Tropical Nephro-Urology	N/A
Sana'a University Journal of Medical Sciences	1993-3584
University of Aden Journal of Natural and Applied Sciences	1606-8947
Yemeni Journal for Medical Sciences [The]	N/A
YHMRJ-Yemeni Health and Medical Research Journal	N/A

Journal	ISSN
YJMHR-Yemeni Journal of Medical and Health Research	N/A
YMJ-Yemen Medical Journal	N/A

**Last update March 2017**

**Appendix III**

**List of EMR Journals Indexed in  
IMEMR**

**(by title)**



S/N	Journal	ISSN
1	AAMJ-Al-Azhar Assiut Medical Journal	1687-1693
2	ABJS-Archives of Bone and Joint Surgery [The]	2345-4644
3	ACES-Actualites Cliniques et Scientifiques	1683-8068
4	Acta Medica Iranica	0044-6025
5	Advances in Cognitive Science	1561-4174
6	Afghan Medical Journal	N/A
7	AFJPH-Afghanistan Journal of Public Health	2308-2895
8	African Journal of Urology	1110-5704
9	Afro-Arab Liver Journal	1687-224X
10	Ain-Shams Journal of Forensic Medicine and Clinical Toxicology	1687-1030
11	Ain-Shams Medical Journal	0002-2144
12	AJAIC-Alexandria Journal of Anaesthesia and Intensive Care	N/A
13	AJM-Alexandria Journal of Medicine	2090-5068
14	AJMB-Avicenna Journal of Medical Biotechnology	2008-2835
15	AJNT-Arab Journal of Nephrology and Transplantation	1858-554X
16	AJU-Arab Journal of Urology	2090-598X
17	Al-Azhar Journal of Dental Science	1110-6751
18	Al-Azhar Medical Journal	1110-0400
19	Alexandria Dental Journal	1110-015X
20	Alexandria Journal of Food Science and Technology	1687-3920
21	Alexandria Journal of Hepatogastroenterology	2090-1879
22	Alexandria Journal of Pediatrics	1687-9945
23	Alexandria Journal of Pharmaceutical Sciences	1110-1792
24	Alexandria Journal of Veterinary Science [AJVS]	1110-2407
25	Alexandria Medical Journal [The]	0516-5849
26	Al-Kindy College Medical Journal	1810-9543
27	Almustansiriya Journal of Pharmaceutical Sciences	1815-0993
28	Al-Quds Medical Journal	N/A
29	Al-Shifa Journal of Ophthalmology	1990-3863
30	Anaesthesia, Pain and Intensive Care	1607-8322
31	Anatomical Sciences Journal [ASJ]	N/A
32	Anesthesiology and Pain Medicine	2228-7523
33	Annals Abbassi Shaheed Hospital and Karachi Medical and Dental College	1563-3241
34	Annals of Alquds Medicine	1815-2635
35	Annals of Jinnah Postgraduate Medical Centre - Karachi	N/A



S/N	Journal	ISSN
36	Annals of King Edward Medical College	1684-6680
37	Annals of Military and Health Sciences Research	2383-1960
38	Annals of Pediatric Surgery	1687-4137
39	Annals of Saudi Medicine	0256-4947
40	Annals of the College of Medicine-Mosul	0028-1446
41	Annals of Thoracic Medicine	1817-1737
42	APMC-Annals of Punjab Medical College	2077-9143
43	Applied Endocrinology in Egypt	1110-1776
44	Applied Food Biotechnology	2345-5357
45	Arab Dental Journal	N/A
46	Arab Family Health and Population	N/A
47	Arab Journal for Food and Nutrition	1608-8352
48	Arab Journal of Biotechnology	1110-6875
49	Arab Journal of Gastroenterology	1687-1979
50	Arab Journal of Laboratory Medicine [The]	1110-1822
51	Arab Journal of Pharmaceutical Sciences	1683-0369
52	Arab Journal of Psychiatry [The]	1016-8923
53	Arabic Journal of Forensic Medicine and Criminal Science	N/A
54	Arabic Medical Journal	N/A
55	Archive of Breast Cancer	2383-0425
56	Archives de l'Institut Pasteur de Tunis	0020-2509
57	Archives of Clinical Infectious Diseases	2641-2345
58	Archives of Iranian Medicine	1029-2977
59	Archives of Trauma Research	2251-953X
60	Armaghane-danesh	1728-6506
61	ARYA Atherosclerosis Journal	1735-3955
62	Asia Oceania Journal of Nuclear Medicine and Biology	2322-5718
63	Asian Journal of Sports Medicine	2008-000X
64	ASJOG-Ain-Shams Journal of Obstetrics and Gynecology	1697-2193
65	ASNJ-Alexandria Scientific Nursing Journal	1687-3858
66	Assiut Medical Journal	1110-0494
67	Assiut University Bulletin for Environmental Researches	1110-6107
68	Assiut Veterinary Medical Journal	N/A
69	Audiology	1735-1936
70	Avicenna Journal of Phytomedicine [AJP]	2228-7930

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71	Bahrain Medical Bulletin	1012-8298
72	Bahria Journal of Professional Psychology	1816-0840
73	Baqai Journal of Health Sciences	2313-4423
74	Basic and Clinical Neuroscience	2008-126X
75	Basrah Journal of Surgery	1683-3589
76	BCCR-Basic and Clinical Cancer Research	2228-6527
77	BEAT-Bulletin of Emergency and Trauma	2322-2522
78	Benha Medical Journal	1110-208X
79	Bina Journal of Ophthalmology	1026-6399
80	Biomedica	1992-4852
81	Bulletin Epidemiologique	0851-8238
82	Bulletin of Alexandria Thoracic Association	1687-997X
83	Bulletin of Endemic Disease-Baghdad	0007-4845
84	Bulletin of Faculty of Pharmacy-Cairo University	1110-0931
85	Bulletin of Faculty of Physical Therapy-Cairo University	1110-6611
86	Bulletin of Nutrition and Food	N/A
87	Bulletin of Pharmaceutical Sciences-Assiut University	1110-0052
88	Bulletin of the Faculty of Science-University of Alexandria	0568-9619
89	Bulletin of the Kuwait Institute for Medical Specialization	N/A
90	Bulletin of the National Nutrition Institute of the Arab Republic of Egypt	N/A
91	Bulletin of the National Research Centre	1110-0591
92	Bulletin of the Ophthalmological Society of Egypt	0078-5342
93	Cahiers Medicaux de Tunisie	0300-5291
94	Caspian Journal of Neurological Sciences	2383-4307
95	Cell Journal [Yakhteh]	2228-5806
96	Challenge-Quarterly [The]	0528-7944
97	Childhood and Development Quarterly	1110-8681
98	Clinical Diabetes	0891-8929
99	Community Health	2386-3033
100	Community Medicine	0301-7265
101	Damascus University Journal for Health Sciences	2072-2265
102	DARU-Journal of Pharmaceutical Sciences	1560-8115
103	DENA-Quarterly Journal of Yasuj Faculty of Nursing and Midwifery	1735-8450
104	Dermatology and Cosmetic Quarterly	2008-7470
105	Diabetes Digest	1369-7501

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106	Dirasat	1026-3764
107	DMJ-Derna Medical Journal	N/A
108	DMJ-Dohuk Medical Journal	2071-7326
109	DRJ-Dental Research Journal	1735-3327
110	EBNESINA-Medical Journal of Military Medicine [The]	1735-9503
111	EDJ-Egyptian Dental Journal	0070-9484
112	Egyptian Heart Journal [The]	1110-2608
113	Egyptian Journal of Anatomy [The]	1110-2144
114	Egyptian Journal of Biomedical Engineering	1012-5558
115	Egyptian Journal of Biophysics and Biomedical Engineering	1110-8525
116	Egyptian Journal of Breastfeeding	N/A
117	Egyptian Journal of Bronchology [The]	1687-8426
118	Egyptian Journal of Cardiothoracic Anesthesia	1687-9090
119	Egyptian Journal of Cataract and Refractive Surgery [The]	N/A
120	Egyptian Journal of Chemistry	0449-2285
121	Egyptian Journal of Chest Diseases and Tuberculosis [The]	0422-7638
122	Egyptian Journal of Community Medicine [The]	1110-1865
123	Egyptian Journal of Dermatology and Andrology	1110-7650
124	Egyptian Journal of Diabetes [The]	N/A
125	Egyptian Journal of Food Science	1110-0192
126	Egyptian Journal of Genetics and Cytology	0046-161X
127	Egyptian Journal of Histology [The]	1110-0559
128	Egyptian Journal of Hospital Medicine [The]	1687-2002
129	Egyptian Journal of Immunology [The]	1110-4902
130	Egyptian Journal of Medical Human Genetics [The]	1110-8630
131	Egyptian Journal of Medical Laboratory Sciences	1110-5593
132	Egyptian Journal of Microbiology	0022-2704
133	Egyptian Journal of Neonatology [The]	1110-8991
134	Egyptian Journal of Neurology, Psychiatry and Neurosurgery [The]	1110-1083
135	Egyptian Journal of Nutrition	1687-1235
136	Egyptian Journal of Nutrition and Health	1687-7950
137	Egyptian Journal of Occupational Medicine	1110-1881
138	Egyptian Journal of Otolaryngology [The]	1012-5574
139	Egyptian Journal of Paediatrics [The]	1687-1677
140	Egyptian Journal of Pediatric Allergy and Immunology [The]	1687-1642

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141	Egyptian Journal of Pharmaceutical Sciences	0301-5068
142	Egyptian Journal of Physiological Sciences	0301-8660
143	Egyptian Journal of Psychiatry [The]	1110-1105
144	Egyptian Journal of Schistosomiasis and Infectious and Endemic Diseases	1110-7278
145	Egyptian Journal of Surgery [The]	1110-1121
146	Egyptian Journal of Urology	1110-5712
147	Egyptian Journal of Veterinary Science	1110-0222
148	Egyptian Liver Journal	2090-6218
149	Egyptian Medical Journal of the National Research Center	1687-1278
150	Egyptian Orthodontic Journal	1110-435x
151	Egyptian Orthopaedic Journal [The]	1110-1148
152	Egyptian Pharmaceutical Journal [National Research Center]	1687-4315
153	Egyptian Population and Family Planning Review [The]	1110-1156
154	Egyptian Rheumatologist [The]	1110-1164
155	Egyptian Rheumatology and Rehabilitation	1110-161X
156	Egyptian Science Magazine [The]	1687-3815
157	EJB-Egyptian Journal of Biochemistry and Molecular Biology [The]	1687-1502
158	EJENTAS-Egyptian Journal of ENT and Allied Sciences	2090-0740
159	EJMM-Egyptian Journal of Medical Microbiology [The]	1110-2179
160	Emergency	2345-4563
161	EMHJ-Eastern Mediterranean Health Journal	1020-3397
162	EMJ-Emirates Medical Journal	0250-6882
163	Endovascular Journal	2008-1812
164	Environmental Health Engineering and Management Journal	2423-3765
165	Esculapio	2309-3080
166	Feyz-Journal of Kashan University of Medical Sciences	1029-7855
167	Frontiers in Biomedical Technologies	2345-5829
168	FWU Journal of Social Sciences	1995-1272
169	Garyounis Medical Journal	0254-7198
170	Gastroenterology and Hepatology from Bed to Bench	2010-2258
171	Gazette of the Egyptian Paediatric Association [The]	1110-6638
172	Genetics in the 3rd Millennium	2423-7159
173	Gezira Journal of Health Sciences	1810-5386
174	GJMS-Gomal Journal of Medical Sciences	1819-7973
175	GJO-Gulf Journal of Oncology [The]	2078-2101

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176	Govaresh	1560-7186
177	Gulf Journal of Dermatology and Venereology [The]	N/A
178	Gulf Medical University: Proceedings	2306-6865
179	HAKIM Research Journal	1561-252X
180	Hamdard Medicus	0250-7188
181	HAYAT-Journal of Faculty of Nursing and Midwifery [The]	1735-2215
182	Health [The]	2218-3299
183	Health in Emergencies and Disasters Quarterly [HDQ]	N/A
184	Health Information Management	1735-7853
185	Health Services Journal of the Eastern Mediterreanean Region	1014-9899
186	Heart Views	1995-705X
187	Hematology, Oncology and Stem Cell Therapy	1658-3876
188	Hepatitis Monthly	1735-143X
189	HJMS-Hadramout Journal of Medical Sciences	2224-1806
190	HMJ-Hamdan Medical Journal	2227-2437
191	Homa-ye-Salamat	2008-2002
192	Hormozgan Medical Journal	1735-2223
193	Hospital-Journal of Iranian Scientific Hospital Association	2008-1928
194	IAJD-International Arab Journal of Dentistry	2218-0885
195	IBJ-Iranian Biomedical Journal	1028-852X
196	IDEES-Revue de Perfectionnement Medical et Paramedical	N/A
197	IEJ-Iranian Endodontic Journal	1735-7497
198	IHJ-Iranian Heart Journal	1735-7306
199	IJBC-Iranian Journal of Blood and Cancer	2008-4595
200	IJB-Iranian Journal of Biotechnology	1728-3043
201	IJCBNM-International Journal of Community Based Nursing and Midwifery	2322-2476
202	IJCN-Iranian Journal of Child Neurology	1735-4668
203	IJDO-Iranian Journal of Diabetes and Obesity	2008-6792
204	IJEHSR-International Journal of Endorsing Health Science Research	2307-3748
205	IJEM-Iranian Journal of Endocrinology and Metabolism	1683-4844
206	IJFS-International Journal of Fertility and Sterility	2008-076X
207	IJHOSCR-International Journal of Hematology-Oncology and Stem Cell Research	2008-2207
208	IJHPM-International Journal of Health Policy and Management	N/A
209	IJHS-Iranian Journal of Health Sciences	2322-553X
210	IJI-Iranian Journal of Immunology	1735-1383

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211	IJKD-Iranian Journal of Kidney Diseases	1735-8582
212	IJMCM-International Journal of Molecular and Cellular Medicine	2251-9637
213	IJME-Iranian Journal of Medical Education	1608-9359
214	IJM-Iranian Journal of Microbiology	2008-3289
215	IJMS-Iranian Journal of Medical Sciences	0253-0716
216	IJN-Iranian Journal of Neonatology	2251-7510
217	IJOH-International Journal of Occupational Hygiene	2008-5109
218	IJO-Iranian Journal of Orthodontics	1735-5087
219	IJP-International Journal of Pediatrics	2345-5047
220	IJPM-International Journal of Preventive Medicine	2008-7802
221	IJPR-Iranian Journal of Pharmaceutical Research	1735-0328
222	IJRM-International Journal of Reproductive Biomedicine	2476-4108
223	IJVM-Iranian Journal of Veterinary Medicine	2251-8894
224	IMJ-Iraqi Medical Journal	0304-4564
225	Infectious Diseases Journal of Pakistan	1027-0299
226	International Cardiovascular Research Journal	2251-9130
227	International Journal of Diabetes and Metabolism	1606-7754
228	International Journal of Diabetes Mellitus	1877-5934
229	International Journal of Endocrinology and Metabolism	1726-913X
230	International Journal of Environmental Research	1735-6865
231	International Journal of Environmental Science and Technology	1735-1472
232	International Journal of Health Sciences	1658-3639
233	International Journal of High Risk Behaviors and Addiction	2251-8711
234	International Journal of Mycobacteriology	2212-5531
235	International Journal of Occupational and Environmental Medicine	2008-6520
236	International Journal of Organ Transplantation Medicine	2008-6490
237	International Journal of Pathology	1810-0155
238	International Journal of Radiation Research	2322-3243
239	International Journal of Women Empowerment	2413-4252
240	International Journal of Women's Health and Reproduction Sciences	N/A
241	IOJ-Iraqi Orthodontic Journal	1816-0581
242	IPMJ-Iraqi Postgraduate Medical Journal	1608-8360
243	Iran Journal of Nursing	2008-5923
244	Iran Occupational Health	1735-5133
245	Iranian Journal of Allergy, Asthma and Immunology	1735-1502

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246	Iranian Journal of Arthropod-Borne Diseases	1735-7179
247	Iranian Journal of Basic Medical Sciences	2008-3866
248	Iranian Journal of Cancer Prevention	2008-2398
249	Iranian Journal of Dermatology	0021-082X
250	Iranian Journal of Diabetes and Lipid Disorders	1726-7544
251	Iranian Journal of Emergency Medicine	N/A
252	Iranian Journal of Environmental Health Science and Engineering	1735-1979
253	Iranian Journal of Epidemiology	1735-7489
254	Iranian Journal of Health and Environment	2008-2029
255	Iranian Journal of Medical Microbiology	1735-8612
256	Iranian Journal of Medical Physics	1735-160X
257	Iranian Journal of Nuclear Medicine	1681-2824
258	Iranian Journal of Nursing and Midwifery Research [IJNMR]	1735-9066
259	Iranian Journal of Nursing Research	1735-7012
260	Iranian Journal of Nutrition Sciences and Food Technology	1735-7756
261	Iranian Journal of Obstetric, Gynecology and Infertility [The]	1680-2993
262	Iranian Journal of Ophthalmology	1735-4153
263	Iranian Journal of Otorhinolaryngology	1560-1293
264	Iranian Journal of Parasitology	1735-7020
265	Iranian Journal of Pediatrics	2008-2142
266	Iranian Journal of Psychiatric Nursing	2345-2501
267	Iranian Journal of Psychiatry	1735-4587
268	Iranian Journal of Psychiatry and Behavioral Sciences	1735-8639
269	Iranian Journal of Psychiatry and Clinical Psychology [ANDEESHEH VA RAFTAR]	1735-4315
270	Iranian Journal of Public Health	0304-4556
271	Iranian Journal of Radiology	1735-1065
272	Iranian Journal of Veterinary Research	1728-1997
273	Iranian Rehabilitation Journal	1735-3602
274	Iraqi Army Medical Journal	N/A
275	Iraqi Journal of Agriculture	1818-6645
276	Iraqi Journal of Biotechnology	N/A
277	Iraqi Journal of Community Medicine	1684-5382
278	Iraqi Journal of Medical Sciences	1681-6579
279	Iraqi Journal of Microbiology	N/A
280	Iraqi Journal of Pharmaceutical Sciences	1683-3597

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281	Iraqi Journal of Tropical Disease Researches	1814-0823
282	Iraqi New Medical Journal	2409-5931
283	IRCMJ-Iranian Red Crescent Medical Journal	1561-4395
284	ISESCO Journal of Science and Technology	2028-8077
285	Isra Medical Journal	2073-8285
286	JABHS-Journal of the Arab Board of Health Specializations	1561-0217
287	JAMC-Journal of Ayub Medical College-Abbotabad-Pakistan	1025-9589
288	JBMS-Journal of the Bahrain Medical Society	1015-6321
289	JBUMS-Journal of Babol University of Medical Sciences	1561-4107
290	JCPSP-Journal of the College of Physicians and Surgeons Pakistan	1022-386X
291	JCR-Journal of Craniomaxillofacial Research	5489-2345
292	JCVTR-Journal of Cardiovascular and Thoracic Research	2008-5117
293	JDB-Journal of Dental Biomaterials	2383-3971
294	JDT-Journal of Dentistry Tehran University of Medical Sciences	1735-2150
295	JDUHS-Journal of the Dow University of Health Sciences	1995-2198
296	JEMTAC-Journal of Emergency Medicine, Trauma and Acute Care	1999-7086
297	JESN-Journal of Egyptian Society of Nephrology [The]	N/A
298	JFH-Journal of Fasting and Health	N/A
299	JIIMC-Journal of Islamic International Medical College [The]	1815-4018
300	JIMDC-Journal of Islamabad Medical and Dental College	2227-3875
301	JISHIM-Journal of the International Society for the History of Islamic Medicine	1303-667X
302	JKCD-Journal of Khyber College of Dentistry	2220-2633
303	JLDA-Journal of the Lebanese Dental Association	1810-9632
304	JLUMHS-Journal of the Liaquat University of Medical Health Sciences	1729-0341
305	JMB-Journal of Medical Bacteriology	2251-8649
306	JMJ-Jamahiriya Medical Journal	2079-1216
307	JMJ-Juba Medical Journal	N/A
308	JMRH-Journal of Midwifery and Reproductive Health	N/A
309	JMR-Journal of Medical Research	1728-1962
310	JNE-Journal of Nursing Education	3812-2322
311	JNMS-Journal of Nursing and Midwifery Sciences	2345-5756
312	JNP-Journal of Nephropathology	2251-8363
313	JOPDAK-Journal of the Pakistan Dental Association Karachi	1680-2292
314	Jordan Journal of Pharmaceutical Sciences	1995-7157
315	Jordan Medical Journal	0446-9283



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316	Journal du Practicien	1113-5667
317	Journal of Advanced Research	2090-1232
318	Journal of Advances in Medical Education and Professionalism	2322-2220
319	Journal of Anesthesiology and Pain	2228-6659
320	Journal of Arak University of Medical Sciences-Rahavard Danesh	1735-5338
321	Journal of Baghdad College of Dentistry	1680-0057
322	Journal of Basic and Applied Sciences	1814-8085
323	Journal of Basic Medical Sciences	N/A
324	Journal of Birjand University of Medical Sciences	N/A
325	Journal of Cardio-Thoracic Medicine	2345-2447
326	Journal of Childhood Studies	2090-0619
327	Journal of Client-Centered Nursing Care	N/A
328	Journal of Clinical Excellence	2322-391X
329	Journal of Clinical Laboratory [The]	1814-411X
330	Journal of Community Medicine	N/A
331	Journal of Contemporary Medical Sciences	2415-1629
332	Journal of Dental Materials and Techniques	2322-4150
333	Journal of Dental Medicine-Tehran University of Medical Sciences	1024-641X
334	Journal of Dental Research, Dental Clinics, Dental Prospects	2008-210X
335	Journal of Dental School-Shahid Beheshti University of Medical Sciences	1735-7683
336	Journal of Dentistry-Shiraz University of Medical Sciences	1728-3426
337	Journal of Dohuk University	1812-7568
338	Journal of Drug Research of Egypt	0085-2406
339	Journal of Environmental Studies	1025-8620
340	Journal of Epidemiology and Global Health	2210-6006
341	Journal of Family and Community Medicine	2230-8229
342	Journal of Family and Reproductive Health	1735-8949
343	Journal of Fundamentals of Mental Health [The]	1028-6918
344	Journal of Gorgan University of Medical Sciences	1562-4765
345	Journal of Guilan University of Medical Sciences	2008-4048
346	Journal of Health Administration	2008-1200
347	Journal of Health and Safety at Work	2251-807X
348	Journal of Health Management and Informatics [JHMI]	2322-1097
349	Journal of Health Promotion Management [JHPM]	2251-8614
350	Journal of Health Sciences and Surveillance System	2345-2218

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351	Journal of Health Scope	2251-8959
352	Journal of Health Specialties [JHS]	1658-600X
353	Journal of Hearing Sciences and Otolaryngology	N/A
354	Journal of Hepatology, Gastroenterology and Infectious Diseases	1110-0796
355	Journal of High Institute of Public Health [The]	2357-0601
356	Journal of Hygiene and Health	1735-2363
357	Journal of Infection and Public Health	1876-0341
358	Journal of Injury and Violence Research	2008-2053
359	Journal of Isfahan Dental School	1735-255X
360	Journal of Isfahan Medical School	1027-7595
361	Journal of Islamic Dental Association of Iran [The]-JIDA	1024-6428
362	Journal of Jahrom University of Medical Sciences	2008-7993
363	Journal of Karbala University	1813-0410
364	Journal of Kerman University of Medical Sciences	1023-9510
365	Journal of Kermanshah University of Medical Sciences [KUMS]	2251-9068
366	Journal of King Abdulaziz University-Medical Sciences	1319-1004
367	Journal of Lasers in Medical Sciences	2008-9783
368	Journal of Legal Medicine and Forensic Sciences [The]	1110-6468
369	Journal of Mashhad Dental School	1560-9286
370	Journal of Mazandaran University of Medical Sciences	1735-9260
371	Journal of Medical Council of Islamic Republic of Iran	1562-1073
372	Journal of Medical Education	1735-3998
373	Journal of Medical Sciences	1997-3438
374	Journal of Medical Sciences	1682-4474
375	Journal of Medical Students	N/A
376	Journal of Medicinal Plants	1684-0240
377	Journal of Minimally Invasive Surgical Sciences	2251-7022
378	Journal of Modern Medical Information Science	N/A
379	Journal of Modern Rehabilitation	2008-2576
380	Journal of Nephrology Urology and Transplantation	1606-9331
381	Journal of Neyshabur University of Medical Sciences	2383-3203
382	Journal of Nursing and Midwifery Quarterly-Shaheed Beheshti University of Medical Sciences and Health Services	1605-8941
383	Journal of Ophthalmic and Vision Research	2008-2010
384	Journal of Paramedical Sciences and Rehabilitation	2322-5238
385	Journal of Patient Safety and Quality Improvement	2345-4482

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386	Journal of Periodontology and Implant Dentistry	2008-7748
387	Journal of Practice in Clinical Psychology	2423-5822
388	Journal of Preventive Medicine	N/A
389	Journal of Qazvin University of Medical Sciences [The]	1561-3666
390	Journal of Rafsanjan University of Medical Sciences	1735-3165
391	Journal of Rehabilitation	1607-2960
392	Journal of Rehabilitation Sciences and Research [JRSR]	2345-6167
393	Journal of Reproduction and Infertility	2228-5482
394	Journal of Research in Behavioural Sciences	1735-2029
395	Journal of Research in Dental Sciences	2008-4676
396	Journal of Research in Health Sciences [JRHS]	2228-7795
397	Journal of Research in Medical Sciences	1735-5311
398	Journal of Research on History of Medicine [The]	N/A
399	Journal of Sabzevar University of Medical Sciences	1606-7487
400	Journal of Safety Promotion and Injury Prevention	2345-2455
401	Journal of School of Public Health and Institute of Public Health Research	1735-7586
402	Journal of Screening and Geographical Medicine	1735-7594
403	Journal of Shaheed Sadoughi University of Medical Sciences and Health Services	1562-272X
404	Journal of Shahrekord University of Medical Sciences	1735-1448
405	Journal of Sheikh Zayed Medical College [JSZMC]	2078-8274
406	Journal of Student Research Committee [BEYHAGH]	2008-0328
407	Journal of Surgery [The]	1681-4517
408	Journal of Taibah University Medical Sciences	1658-3612
409	Journal of Tehran University Heart Center [The]	1735-8620
410	Journal of the Arab Board of Medical Specializations	1561-0217
411	Journal of the Arab Dentist	N/A
412	Journal of the Arab Neonatology Forum	1812-1756
413	Journal of the Arab Society for Medical Research	1687-4293
414	Journal of the Egyptian Medical Association [The]	0013-2411
415	Journal of the Egyptian National Cancer Institute	1110-0362
416	Journal of the Egyptian Public Health Association [The]	0013-2446
417	Journal of the Egyptian Society of Endocrinology, Metabolism and Diabetes [The]	1110-1245
418	Journal of the Egyptian Society of Obstetrics and Gynecology [The]	0258-3216
419	Journal of the Egyptian Society of Parasitology	1110-0583
420	Journal of the Egyptian Society of Pharmacology and Experimental Therapeutics [The]	N/A

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421	Journal of the Egyptian Society of Toxicology	1110-127X
422	Journal of the Faculty of Medicine-Baghdad	0041-9419
423	Journal of the Medical Research Institute-Alexandria University	1110-0133
424	Journal of the Pakistan Prosthodontics Association [JPPA]	2308-8613
425	Journal of the Royal Medical Services	2078-8703
426	Journal of the Saudi Heart Association	1016-7315
427	Journal of Tropical Nephro-Urology	N/A
428	Journal of Veterinary Research	2008-2525
429	Journal of Zahedan University of Medical Sciences and Health Services	1735-076X
430	Journal of Zanjan University of Medical Sciences and Health Services	1606-9366
431	JPAD-Journal of Pakistan Association of Dermatologists	1560-9014
432	JPC-Journal of Pediatric Club [The]	N/A
433	JPC-Journal of Pharmaceutical Care	2322-4630
434	JPDA-Journal of the Pakistan Dental Association	1680-2292
435	JPIMS-Journal of Pakistan Institute of Medical Sciences	1683-6928
436	JPMA-Journal of Pakistan Medical Association	0030-9982
437	JPMI-Journal of Postgraduate Medical Institute	1013-5472
438	JPN-Journal of Pediatric Nephrology	N/A
439	JPPS-Journal of Pakistan Psychiatric Society	1726-8710
440	JRH-Journal of Research and Health	2251-6395
441	JRMS-Journal of Research in Medical Sciences	1735-1995
442	JRRS-Journal of Research in Rehabilitation Sciences	1735-7519
443	JSOGP-Journal of the Society of Obstetricians and Gynaecologists of Paksitan	N/A
444	JSP-Journal of Surgery Pakistan International	1817-0242
445	Jundishapur Journal of Microbiology [JJM]	2008-3645
446	Jundishapur Journal of Natural Pharmaceutical Products	1735-7780
447	Jundishapur Scientific Medical Journal	2252-052x
448	Kasr El Aini Journal of Surgery	0022-9237
449	Kasr El-Aini Medical Journal	N/A
450	Khartoum Pharmacy Journal	1816-5168
451	Kidney Forum	1369-3050
452	KMJ-Kuwait Medical Journal	0023-5776
453	KMUJ-Khyber Medical University Journal	2072-7763
454	KOOMESH-Journal of Semnan University of Medical Sciences	1608-7046
455	Kufa Medical Journal	N/A

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456	Lahore Journal of Public Health	N/A
457	Lebanese Science Journal	1561-3410
458	Libyan Journal of Infectious Diseases [The]	N/A
459	LJM-Libyan Journal of Medicine	1993-2820
460	LMJ-Lebanese Medical Journal	0023-9852
461	Maghreb Medical	0330-258X
462	Mansoura Journal of Pharmaceutical Sciences	1110-1318
463	Mansoura Medical Bulletin	1012-5590
464	Mansoura Medical Journal	1110-211X
465	Maroc Medical	0253-4053
466	MDV-Molecular Diagnosis and Vaccine	1687-2010
467	MEAJO-Middle East African Journal of Ophthalmology	0974-9233
468	Medical Arabization	N/A
469	Medical Channel	1681-5491
470	Medical Forum Monthly	1029-385X
471	Medical Journal of Ahmed Maher Teaching Hospital [The]	N/A
472	Medical Journal of Basrah University [The]	0253-0759
473	Medical Journal of Cairo University [The]	0045-3803
474	Medical Journal of Islamic World Academy of Sciences	1016-3360
475	Medical Journal of Mashad University of Medical Sciences	1735-4013
476	Medical Journal of Tabriz University of Medical Sciences and Health Services	1608-5671
477	Medical Journal of Teaching Hospitals and Institutes [The]	1110-2039
478	Medical Journal of the Islamic Republic of Iran	1016-1430
479	Medical Journal of Tikrit University [The]	N/A
480	Medical Laboratory Journal	1735-9007
481	Medical Principles and Practice	1011-7571
482	Medical Sciences Journal of Islamic Azad University	1023-5922
483	Medical Spectrum [The]	0254-8534
484	Medical-Surgical Nursing Journal	2322-178X
485	Medicine Today	1813-9876
486	MEJC-Middle East Journal of Cancer	2008-6709
487	Middle East Journal of Anesthesiology	0544-0440
488	Middle East Journal of Digestive Diseases	2008-5230
489	Middle East Journal of Family Medicine	N/A
490	Minoufia Medical Journal	1110-2098

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491	MJEM- Mediterranean Journal of Emergency Medicine	2222-9442
492	MJFCT-Mansoura Journal of Forensic Medicine and Clinical Toxicology	1110-5437
493	Modares Journal of Medical Sciences, Pathobiology	1562-9554
494	Mother and Child	0379-2617
495	Nanomedicine Journal	2322-3049
496	Neonatology	1687-0492
497	Nephro-Urology Monthly	2251-7006
498	Neurosciences	1319-6138
499	New Egyptian Journal of Medicine [The]	1110-1946
500	New Iraqi Journal of Medicine [The]	1817-5562
501	Novelty in Biomedicine	2345-3346
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646	Zahedan Journal of Research in Medical Sciences	N/A
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