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Hematocolpos SUR Imperforation

Discovering Thoughts, Inventing Future

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Isosorbide Mononitrate and Misoprostol for Cervical Ripening in Induction of Labor

By Mohamad Elsokary, Mohamad Abdelhamed & Emad Mohamad

Ain Shams University, Egypt

Abstract- *Background:* The most favorable method for cervical ripening is not fully agreed upon by practitioners; however, isosorbide mononitrate administration is considered a low-risk method of labor induction for pregnant women at full term.

Objective: To evaluate the safety and effectiveness of adding isosorbide mononitrate to misoprostol for cervical ripening in prelabor induction of full term pregnant women in comparison with misoprostol alone. Design: Randomized study.

Setting: Ain Shams Maternity teaching hospital. Patients and methods: 120 women were divided randomly into two equal arms of 60 women in each one.

Intervention: Patients admitted through the reception room or out patient clinic and they scheduled for induction of labor. Group I were given intravaginal isosorbide mononitrate with misoprostol while group II were given placebo with misoprostol intravaginally.

Keywords: *isosorbide mononitrate; misoprostol; cervical ripening; induction of labor.*

GJMR-E Classification : *NLMC Code: WP 475*

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Isosorbide Mononitrate and Misoprostol for Cervical Ripening in Induction of Labor

Mohamad Elsokary [α], Mohamad Abdelhamed [σ] & Emad Mohamad [ρ]

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Intervention: Patients admitted through the reception room or out patient clinic and they scheduled for induction of labor. Group I were given intravaginal isosorbide mononitrate with misoprostol while group II were given placebo with misoprostol intravaginally.

Results: Group I showed better significant improvement than Group II in Bishop score after 6 hour (7.9 vs 6.6, p=0.001), shorter duration of active phase (8.2 vs 10.9h, p=0.001), as well as the duration of labor (12 vs 17.1h, p=0.001) in group I comparing to group II. The main side effect of IMN was headache.

Conclusion: The addition of Isosorbide mononitrate to misoprostol is safe and increase the effectiveness of pre-induction cervical ripening in comparison to misoprostol alone.

Keywords: isosorbide mononitrate; misoprostol; cervical ripening; induction of labor.

I. Introduction

Induction of labour has increased dramatically over the past two decades[1]. Indications for induction of labor are either maternal (pre-eclampsia, pregnancy-induced hypertension) or fetal (post-term dates, growth retardation, ruptured membranes, diabetes)[2].

Nitric oxide (NO) is an apocrine hormone, synthesized in the cell by oxidation of L. arginine through the enzyme Nitric oxide synthase[3]. In human, it is involved in many physiological and pathological processes. It stimulates cyclo-oxygenase II which is involved in prostaglandin synthesis[4].

In contrast to prostaglandins, nitric oxide donors inhibit rather than stimulate uterine contractions, and promote rather than restrict uterine blood flow[3]. Therefore, nitric oxide donors appear to be the ideal cervical ripening agent[5] for outpatient use. It also results in fewer adverse effects like headache, hot flushes, nausea, dizziness and abdominal pain but is less effective than misoprostol[6].

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II. Patients and Methods

This randomized, double-blind, controlled study was carried out on 120 full term pregnant women admitted for induction of labor in Ain Shams University Maternity Hospital from January 2011 to December 2012. The study was approved by the research Ethics Committee of Ain Shams University Maternity Hospital, Cairo, Egypt. Informed consent was obtained from each participant, after they were fully informed about the nature and scope as well as the potential risks of the study before the first application of the medication.

a) Justification of the sample size

Using 90% power, α error 0.05, standard deviation 3 and case to control ratio 1:1, a sample size of 60 women was calculated to detect a difference of at least 20% between the two groups.

Patients were divided randomly into two groups, **Group A** included 60 patients were induced by intravaginal isosorbide mononitrate (Effox 40 mg MINAPHARM) in addition to misoprostol (50 mcg), **Group B** included 60 patients induced by placebo in addition to misoprostol (50 mcg) administered in the posterior vaginal fornix.

Inclusion criteria included being a Primipara with single viable post-term cephalic pregnancy, Bishop score of ≤ 5, average liquor, intact membrane, average size of the fetus, and absence of pelvic contraction Exclusion criteria included Bishop's score ≥6, rupture of membranes, suspected chorioamnionitis, placenta previa or unexplained vaginal bleeding, uterine scar, hypertonic uterine contraction pattern, soft tissue obstruction, medical disorders eg diabetes mellitus, renal or hepatic dysfunction, fetal malpresentations, multiple pregnancies, and intrauterine growth retardation (<5th percentile).

All patients were subjected to history taking that included a complete personal, medical, and a detailed obstetric history, in addition to a menstrual, and contraceptive history, with emphasis on the date of the last menstrual period to determine the exact gestational age.

General examination included recording the vital signs as blood pressures, pulse, temperature, respiratory rate, chest and heart examination.

Abdominal examination included estimation of the fundal level, Leopold maneuvers and fetal heart rate.

Vaginal examination was done every 4 hours to all patients to evaluate the Bishop score.

Table (1) : Bishop score (points assigned).

Factors	Rating			
	0	1	2	3
Dilatation	Closed	1-2 cm	3-4 cm	5 cm
Effacement	0-30%	40-50%	60-70%	80%
Station	-3	-1, -2	-1, 0	+1, +2
Consistency	Firm	Medium	Soft	-
Position	Posterior	Middle	Anterior	-

Unfavorable cervix Bishop score ≤ 5

For all patients, sonar examination was done to exclude any abnormality of the fetus and to ensure the gestational age, and the amniotic fluid index.

The drugs were available in dark envelopes. An attending nurse selected an envelope that contains the medication for each patient. The patients were assigned to receive intravaginal IMN and misoprostone (Group A) or misoprostol and placebo (Group B). Examination of the patients was done by the residents, Each resident followed up his patient and data were documented on a partogram. For each patient. Preinduction external monitoring by Cardio tocography was done. Uterine contractions and fetal heart rate were checked every 30 minutes. A second and a third dose of the medications were given if the Bishop score was < 6 after 6 hours.

On repeated examinations after giving the medications, cases with favorable cervices (Bishop's score ≥ 6 with cervical dilation ≥ 4cm) were subjected to artificial rupture of membranes (AROM) and according to the presence or absence of meconium the following interventions were performed:

a. If liquor was clear (i.e. no meconium), induction of labor was started by oxytocin drip using titration method with fetal heart rate monitoring.
b. If liquor was stained with thin meconium (i.e., mild degree), fetal heart rate monitoring was done for 30 minutes
c. If liquor was deeply stained (i.e., sever degree), cesarean section was done to avoid meconium aspiration syndrome and fetal anoxia.

Oxytocin infusion was given when cervical dilatation is 3 cm. IV drip of 5 units in 500 ml of Ringer solution were started. Infusion rate was increased (by doubling drops/min) every 30 min until 3 contractions occurred every 10 minutes and each lasting for 45-60 seconds. If 60 drops/min was reached with no efficient contractions, infusion was increased by administrating 10 units oxytocin in 500 ml Ringer solution.

Assessment of uterine contractions was done every 30 minutes to ensure adequate contractions (3-5 contractions in 10 minutes each lasts for 45-60 seconds).

Both groups were compared regarding:

- Age, parity, gestational age.
- Time from start of medication to first contraction pain.
- Time from start of AROM ± oxytocin to active phase of labor.
- Duration of 1st, 2nd and 3rd stage of labor, and mode of delivery.
- Maternal complications e.g., hyperstimulation, postpartum hemorrhage, headache, nausea, vomiting and dizziness.
- Neonatal outcome including Apgar score at 1 and 5 minutes and Neonatal Intensive Care Unit admission were recorded.

b) Statistical Methods

Statistical analysis was done using the SPSS software for windows, version 17 (SPSS, Chicago, IL, USA). The paired t test for independent samples was used for comparisons between means. The Chi-square test (x2 test) was used for analysis of the qualitative variables. $P<0.05$ was considered significant.

III. Results

Table (2) shows that, there is no statistical significant difference between the two groups as regards mean age , gestational age, or mean initial bishop score. There is a higher bishop score after 6 hours among cases in group I compared to cases in group II and the difference is statistically significant. There is a shorter duration of the active phase of delivery and labor in group I compared to group II and the difference is highly significant. There is no statistical significant difference between the two groups as regards the mean weight of infants or the Apgar score at 1 and 5 minutes.

Table 2 : Comparison between both groups as regard the descriptive data.

Variable	Group I n = 60 Mean ± SD	Group II N = 60 Mean ± SD	T	P
Age(years)	22.6 ± 2.0	21.9 ± 2.0	1.7	0.07
Gestational age(wks)	40.1 ± 0.8	40.3 ± 0.3	1.8	0.06
Initial bishop	3.8 ± 0.6	3.5 ± 0.6	1.8	0.06
Bishop score after 6h	7.9 ± 0.6	6.6 ± 0.7	10.6	0.00*
Mean duration of active phase(h)	8.2±1.3	10.9 ± 1.2	12.1	0.00*
Mean duration of labor(h)	12±2.9	17.1± 2.3	10.7	0.00*
Neonatal Weight (gms)	2952.1 ± 173.3	2955.0 ± 236.0	0.07	0.9
Apgar 1 minute	7.5 ± 1.1	7.2 ± 1.2	1.7	0.07
Apgar 5 minutes	9.2 ± 0.5	9.3 ± 0.6	0.4	0.6

Table (3) shows that there is no significant difference between the two groups as regards oxytocin requirementsor the indication of C.S There is no statistical significant difference between the two groups as regards indication for C.S. There is a higher percentage of C.S delivery, nausea and shivering in group II compared to group I but the difference is not statistically significant.

Table 3 : Comparison between both groups as regard the mode of delivery and requirement for oxytocin.

Variable		Group I n =60		Group II n =60		X2	P
		n. (%)		n. (%)			
Requirement for oxytocin							
	Required	19	(30)	25	(40)	10.3	0.08
	Not required	41	(70)	35	(60)		
Mode of delivery Indication for CS							
	VD	54	90.0	49	81.7		
	CS	6	10.0	11	18.3	1.7	0.1
	Arrest of cervical dilatation	3	(5)	5	(8.3)		
	Fetal distress	3	(5)	5	(8.3)	2.2	0.5
	Failed induction	0	(0)	1	(1.7)		

Table (4) shows that, there is a higher incidence of side effects and headache in group I compared to group II and the difference is statistically significant. There is no statistical significant difference between the two groups as regards the incidence of PPH or retained placenta. There was no need for ICU admission. Higher percentage of uterine contraction abnormalities in group I 15% compared to 11.7% in group II but the difference is not statistically significant.

Table 4 : Comparison between both groups as regard drugs side effects.

Variable		Group I		Group II		T	P
Adverse side effects		28	(46.7)	17	(28.3)	4.3	0.03*
	Headache	22	(36.7)	5	(8.3)	13.8	0.000 *
	Nausea	2	(3.3)	7	(11.7)	3.0	0.1
	Shivering	4	(6.7)	5	(8.3)	0.1	0.7
	PPH	0	(0)	1	(2)	2.041	0.153

Variable		Group I		Group II		T	P
	Retained placenta	1	(1.8)	0	(0)	1.042	0.307
ICU admission		5	8.3	5	8.3	0.0	1.0
Hypersystole		3	5.0	2	3.3		
Tachysystole		5	8.3	4	6.7	0.3	0.9
Hyper stimulation		1	1.7	1	1.7		

IV. Discussion

Several studies postulated that a combination between misoprostol and IMN might improve induction success rates while reducing side effects associated with misoprostol[7].

In the current study, the difference in the mean duration of the active phase in group I versus group II was statistically significant. The interval from the beginning of induction to the time of delivery was shorter in group I than in group II. These results agreed with another study[8], which reported that the association of NO donor glyceryl trinitrate (GTN) (500 mg/kg) with dinoprostone (2 mg) was more effective than dinoprostone alone for cervical ripening and labor induction at term. In agreement with our results, similar study[9], had found significantly shorter interval from the beginning of induction to the time of delivery in misoprostol and IMN group versus misoprostol group (19.56 ± 3.96 versus 23 ± 2.62 $P \leq 0.001$)., and agreed with a study[10] , which had found the time from start of medication to vaginal delivery in IMN group was significantly longer (25.6±6.1 versus 14 ± 6.9 hrs).

These findings disagreed with another study[11], which showed that vaginal application of IMN plus dinoprostone appeared to be no more effective than placebo plus dinoprostone for cervical ripening and labor induction at term suggesting a different effectivity of IMN depending on the gestational age in this study, also these results disagreed with a study[7], which reported that, the time from start of induction to vaginal delivery not reduced when IMN was added to misoprostol, might be due to the relaxing effect of IMN on the uterine fundus. The findings could possibly be explained by the differences in parity of patients, mean gestational age at delivery and the indication for the induction of labour.

In the current study, the difference in Bishop score after 6 hours of medication in group I versus group II was statistically significant, this coincided with similar study[12], which found The mean initial modified Bishop's score for Group I was 2.8 then Bishop's score became 3.9, 4.1, 5.1, 5.9 after 2, 4, 6, 8 hours, respectively indicating significant improvement in the modified Bishop's score This improvement may be related either to the inflammatory mechanisms associated with IMN involving vasodilatation, to altered vascular permeability and neutrophils influx into cervical tissues leading to cervical ripening and changes in cervical consistency, but these findings disagreed with another study[13], which failed to demonstrate an improvement in the mean Bishop score following IMN despite showing clinical effectiveness in shortening labor, also disagreed with a recent study [8], This may be due to different type and dose of drug to our study.

There is a higher percentage of occurrence of side effects and headache in group I compared to group II and the difference is statistically significant and can be explained by vasodilatation effect of (NO) donors these complications were minimal and self limited and needed no medical interference, this agreed by other studies[5,7,11].

In the present study both groups were similar with no significant statistical difference regarding mean maternal age, gestational age. Also there was no statistical significant difference between both groups as regard the birth weight, Apgar score at 1 and 5 minutes and the need for neonatal ICU admission, This result coincided with other studies[8,9]. These results were higher in GTN group but did not reach the level of statistical significance.

In the present study, there was no significant difference between both groups as regards the incidence of uterine hypersystole, tachysystole and hyperstimulation. These results coincided with another study[9], which found no significant difference between 2 groups in the incidence of uterine hypersystole, tachysystole and hyperstimulation. But these results disagreed with similar study [14], which had found that GTN is safer, but less effective, compared with prostaglandins for pre induction cervical ripening at term.

In the present study as regards the C.S rate there was no significant difference between the 2 groups, This result coincided with a study[7], which concluded that no significant difference between 2 groups as regards the C.S rate. But this study disagree with another study[10] who found dystocia was more frequent in IMN 9 (45%) versus, 6 (37.5%) in misoprostol group while non reassuring FHR in IMN group was 3 (15%) versus, 9 (56.3%) in misoprostol group.

V. Conclusion and Recommendations

Isosorbide mononitrate plus misoprostol is safe and more effective for pre-induction cervical ripening in comparison to misoprostol alone.

VI. Acknowlegment

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References Références Referencias

1. *Richardson A and Mata C.* NHS Maternity Statistics, England: 2005-06.London: National Statistics, The Information Centre 2007.
2. *Mol B.* Conference of clinical management of problems in uterine contractility, 17-18 September 21010, Hilton Metropol, Bimingham.
3. *Grozdanovic Grozdanovic Z, Mayer B, Baumgartep H C and Burnung G.* NO synthase-containing nerve fibers and neurons in genital tract of the female mouse. Cell tissue Res1994; 275: 355-360.
4. *Chwalisz K and Grafield RE.* Nitric oxide as the final mediator of cervical ripening. Human Record 1998; 13: 245-52.
5. *Hbib Habib SM, Emam SS and Saber AS.* Outpatient cervical ripening with nitric oxide donor isosorbide mononitrate prior to induction of labor. Int J Obstet Gynecol 2008:101(1): 57-61.
6. *Cunningham FG, Leveno KJ and Bloom SL.* Induction of labor, in Williams Obstetrics, 22nd Edition; McGraw Hill 2005; 231-51; 537.
7. *Collingham JP, Fuh KC and Caughey AB.* Oral misoprostol and vaginal isosorbide mononitrate for labor induction: a randomized controlled trial. Obstet Gynecol 2010; 116(1): 121-6
8. Nunes FP, Campos AP, Pedroso SR, et al. Intravaginal glyceryl trinitrate and dinoprostone for cervical ripening and induction of labor. Am J Obstet Gynecol 2006 Apr; 194(4):1022-6.
9. *Abdellah MS, Hussien MS and AboAlhassn AH.* Intravaginal administration of IMN and misoprostol for cervical ripening and induction of labor, Arch Gynaecol Obstet 2011, 284, 1: 25-30.
10. *Chanrachakul B, Herabutya Y and Punyavachira P.* Randomized comparison of glyceryl trinitrate and prostaglandin E2 for cervical ripening at term. Obstet Gynecol 2000; 96: 549-553.
11. *Wolfier MM, Facchinetti F, Venturini P, Huber A, Helmer H, et al.* Induction of labor at term using isosorbide mononitrate simultaneously with dinprostone compared to dinoprostone treatment alone. Am J Obstet Gynecol 2006; 195: 1617-22.
12. *Sherif H, ahmed M, Amgad A.* comparison between misprostol and isopronide mononitrate and misoprostol in preinduction cervical repair. Obstet Gynecol 2009; 35 :0258-3216
13. *Bollapragada SS, Mackenzie F, Norrie JD, Eddama O, Petrou S and Ried M.* Randomized placebo-controlled trial of outpatient (at home) cervical ripening with isosorbide mononitrate (IMN).The IMOP study. Br J Obstet Gynecol: 2009: 116(9): 1185-95.
14. *Sharma Y, Kumar S, Mittal S, Misra R and Dadhwal V* Evaluation of glyceryl trinitrate, misoprostol, and prostaglandin E gel for preinduction cervical ripening in term pregnancy. J Obstet Gynecol Res 2005, 31: 210-215.

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Hematocolpos Sur Imperforation Hymeneale a Propos De 3 Cas

By Dr. Ramsiss. H., Dr. Harrak. H., Pr. Amrani. S., Pr. Elyoussfi. M., Pr. Benyahya & Pr. Bargach. S

Resume- L'imperforation hymenéale est une malformation assez rare, et grave lorsqu'elle est ignorée. En se basant sur les données de la littérature concernant cette malformation, on a réalisé une étude rétrospective portant sur 3 cas d'hématocolpos sur hymen imperforé, colligés au service de gynécologie obstétrique cancérologie et grossesse à haut risque de la maternité Souissi de Rabat (MAROC), sur une période allant de janvier 2011 à janvier 2014.

Il ressort de ce travail que cette anomalie est l'apanage des patientes en période péri pubertaire.

L'éventail des signes cliniques est dominé par les douleurs abdominopelviennes; l'existence d'une tumefaction abdomino-pelvienne chez toutes nos patientes et par des complications urinaires a type de rétention aigue d'urine chez une de nos 3 cas.

Le diagnostic est surtout clinique il est orienté par l'échographie.

L'imperforation hym²énéale reste l'étiologie la plus fréquente, elle est retrouvée chez nos 3 malades, Le traitement chirurgical est simple porté sur une incision de la membrane obturante, et un drainage de la collection.

GJMR-E Classification : NLMC Code: WQ 252

Strictly as per the compliance and regulations of:

Hematocolpos Sur Imperforation Hymeneale a Propos De 3 Cas

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Concernant l'évolution de nos patientes, jugée sur l'état fonctionnel et morphologique, une guérison complète a été obtenue chez nos trois patientes sans rechute.

I. Introduction

L'imperforation hyménéale est une affection relativement rare, mais la plus fréquente des malformations congénitales du tractus génital féminins (1). Elle est souvent isolée(2),

La cryptoménorrhée douloureuse par imperforation hyménéale parapubertaire est le tableau révélateur le plus classique(3). Des symptômes non gynécologiques égarent parfois le diagnostic.

L'imperforation hyménéale est de diagnostic facile grâce à l'inspection des organes génitaux externes, L'échographie a simplifié l'analyse de cette pathologie rare, et constitue la meilleure méthode de diagnostic précoce grâce à l'échographie in utéro.

L'hyménéotomie est le traitement de l'hématocolpos par imperforation hyménéale. Pour les hématocolpos révélateurs des malformations, le traitement de la malformation causale est plus complexe.

Le diagnostic et le traitement précoce de l'imperforation hyménéale est important afin d'éviter toutes séquelles tubaires.

Dans notre travail on rapporte une série de 3 imperforations hyménéales.

II. Observations

a) Cas num 1

Patiente de 14 ans, est adressée par le service de pédiatrie de l'hopital d'enfant de Rabat pour un tableau d'abdomen aigu avec la notion de douleurs cycliques depuis trois mois. Elle n'a pas eu sa ménarche, mais présente des caractères sexuels développés (seins à S4 et pilosité pubienne à P5). L'examen a montré un léger bombement de l'hymen et de la cloison recto-vaginale *(photo1)*. L'échographie a mis en évidence un hématocolpos (photo 2). L'incision chirurgicale de l'hymen a permis de vider 500 millilitres de sang noirâtre. L'évolution est favorable lors de l'examen de suivi de la patiente après trois semaines. Un certificat médicolégal de perte de virginité médical est donné à la famille.

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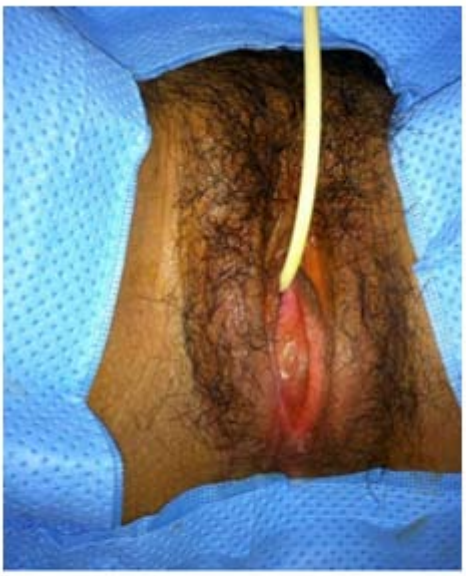
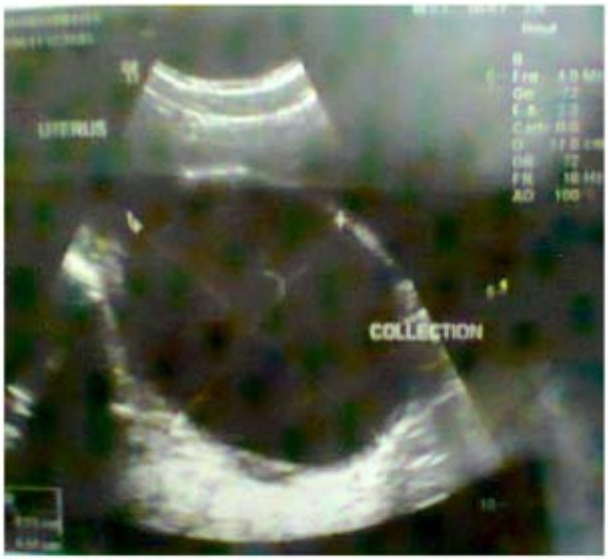


un hymen imperforé bombant

Photo 1



une échographie montrant une volumineuse collection rétro-vésicale en faveur d'un hématocolpos

Photo 2

b) Cas num 2

Patiente de 13 ans admise aux urgences pédiatriques de l'hôpital d'enfant de Rabat pour douleur pelvienne remontant a 4 jours avant son admission compliquée de rétention aigue d'urine depuis 12h à l'examen abdominal et pelvien on note la présence d'une masse pelvienne de 10cm rénitente mobile par rapport aux deux plans avec un globe vésicale .un bon développement des organes génitaux externes et des caractères sexuels secondaires avec un hymen imperforé bleuâtre et bombant (photo 3).Une échographie réalisée en urgence a montrer un hematocolpos avec hematosalpinx droit .puis nous a été référée pour prise en charge chirurgicale une incision en y de l'hymen avec drainage de 400 cc de sang noirâtre plicature des lambeaux au vicryl 5(0) a la paroi mise en place d'une sonde vesicale 18ch dans le vagin pendant 10 jours .une évolution sans sténose .l'orifice a été dilaté une fois par semaine pendant 1 mois puis une fois par quinze jours puis une tous les trois mois . Un certificat médicolégal de perte de virginité médical est donné à la famille.

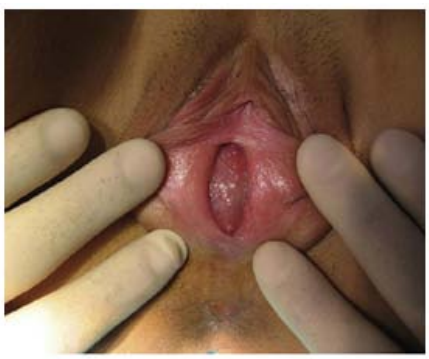


Photo 3

évacuation d'un sang noirâtre de la collection

Photo 4

c) Cas num 3

Patiente de 13 ans admise aux urgences de la maternite Souissi pour douleur pelvienne cyclique depuis 6 mois avec exacerbation de la douleur depuis 15 jours sans signes urinaires avec masse pelvienne de 11 cm , a l'échographie l'utérus est en place mesurant 6,8/4,35 réguliers avec rétention liquidienne endocavitaire finement échogéne communiquant via l'orifice cervical ,collection retro vésicale finement échogéne a paroi épaissie de 8,5/6,6cm.

Incision en Y. drainage de 450cc de sang noirâtre (photo 4), passage d'une sonde dans le vagin L'évolution est satisfaisante, on a réalisé une dilatation aux 10ème jours après sa sortie 1 fois / semaine, puis 1 fois / 15 jours, puis 1 fois / mois. Un certificat médicolégal de perte de virginité médical est donné à la famille.

III. Resultats et Discution

L'hymen est un reliquat du feuillet mésodermique qui se perfore normalement pendant les dernières étapes du développement embryonnaire (4). L'imperforation hyménéale est un incident rare estimé à 1 pour 2000 naissances féminines (4,5). L'incidence rapportée par la littérature est largement variable, selon qu'on apprécie de façon globale, selon l'âge ou selon le type de la lésion anatomique (6). Dans les cas typiques, l'âge de découverte de l'hématocolpos est entre 12 et 15 ans (l'âge de la ménarche) (7 ; 8). Dans notre série qui comporte 3 cas d'hématocolpos, l'âge de nos malades varie entre 13 et 14 ans (la periode pubertaire).

La majorité des cas rapportés dans la littérature sont sporadiques, néanmoins, quelques cas familiaux ont été décrits laissant présumer d'une prédisposition génétique probable (5,9).

Aucune parmi les patientes que nous avons présentées n'a d'antécédents familiaux d'imperforation hyménéale.

Le diagnostic d'imperforation hyménéale est possible in utéro devant la constatation à l'échographie d'un hydrométrocolpos (10, 11). Le diagnostic in utéro présente en plus l'intérêt de rechercher des malformations rénales associées. Ce diagnostic peut se faire par un dépistage systématique à la naissance mais aussi devant un hydrométrocolpos lors de la crise génitale du nouveau-né de sexe féminin (12). Le plus souvent, cette malformation est découverte à la puberté. Le diagnostic doit être suspecté devant une jeune fille présentant une aménorrhée primaire avec des caractères sexuels secondaires normalement développés.

Les patientes consultent généralement pour des douleurs pelviennes récurrentes secondaires à l'accumulation du sang dans le vagin ou hématocolpos (13). Le caractère cyclique des crises douloureuses peut manquer étant donné l'irrégularité habituelle du cycle menstruel au cours de la période péripubertaire (14). Les douleurs peuvent être trompeuses, pseudo-appendiculaire et induire des interventions 'en excès' pour suspicion d'appendicite aigue (15). L'hématocolpos peut comprimer l'urètre et être à l'origine d'une dysurie, d'une rétention vésicale complète voire d'une urétéro-hydronéphrose bilatérale (13,16,17,18,19,20) Einsenberg (21) a rapporté à travers une série de 44 observations d'hématocoplos, 7 cas de rétention vésicale. La constipation relève du même mécanisme compressif (22). Dans notre série toutes les patientes n'étaient pas encore ménarche. Toutes les malades ont un bon développement des organes génitaux externes, et des caractères sexuels secondaires.

Deux patientes ont présenté des douleurs cycliques auparavant La douleur abdomino-pelvienne a dominé le tableau fonctionnel, elle a été observée dans tous les cas. 1 de nos malades a rapporté des signes urinaires à type de rétention aigue des urines. Aucune de nos malades n'a présenté des signes de compression vasculaire, nerveuse ou digestive.

Le sang est retenu d'abord dans le vagin, puis l'utérus (hématométrie) et éventuellement les trompes. Son volume varie d'une patiente à une autre et peut même atteindre 3 litres (9). Le flux menstruel rétrograde peut altérer les trompes ou entraîner des lésions d'endométriose qui peuvent entraver la fertilité ultérieurement (23). Toutefois, cette éventualité est rare si le diagnostic est établi précocement et la fertilité est généralement conservée (24, 25, 26). Le diagnostic clinique de cette malformation est le plus souvent facile. L'examen de l'abdomen met en évidence une tuméfaction sus-pubienne ovalaire, à grosse extrémité supérieure, aux contours réguliers, de consistance fluctuante ou rénitente, sensible, mate à la percussion, et plongeant en bas derrière la symphyse pubienne. L'inspection de la vulve permet de reconnaître l'imperforation en montrant une membrane translucide bleutée faisant saillie entre les petites lèvres. Le toucher rectal perçoit une tuméfaction médiane, antérieure, de consistance liquidienne, rénitente, se prolongeant avec la masse abdominale et descendant à proximité du sphincter anal.

Dans notre série L'examen génital montre l'existence d'une imperforation hyménéale avec un hymen imperforé bombant chez les 3 malades, la palpation a pu objectiver l'existence d'une masse chez toutes les patientes En cas de doute diagnostique, l'échographie peut être utile en montrant l'hématocolpos sous la forme d'une image médiane, rétrovésicale de tonalité liquidienne contenant quelques échos hétérogènes. Elle permet aussi d'apprécier le retentissement en amont de la rétention menstruelle en recherchant une hématométrie, un hématosalpinx et un épanchement intraabdominal (27). L'IRM prend place dans l'exploration des masses pelviennes et des malformations utéro-vaginales. Ces avantages sont surtout valables en cas de difficulté de diagnostic échographique.

L'UIV est réalisée devant des signes échographiques évoquant.

La coelioscopie permet d'établir un bilan lésionnel précis du retentissement en amont et de traiter une éventuelle endométriose ainsi que les adhérences périannexielles secondaires à l'inflammation chronique (10). Elle est surtout indiquée en cas d'hématocolpos important faisant craindre un retentissement en amont (10,11,12,28).

Dans notre étude l'échographie abdomino-pelvienne a été réalisée chez toutes les malades, l'échographie était complémentaire au diagnostic confirmer cliniquement. Elle a permis de mettre en évidence une collection liquidienne utérine et intra

vaginale en faveur d'un hématocolpos. Le traitement est chirurgical .Les objectifs de ce traitement sont :

· Rétablir la perméabilité du tractus génital.
· Assurer une fonction sexuelle normale.
· Tenter de préserver la fertilité ultérieure.

Il doit être entrepris dans tous les cas, il ne faut guère compter sur la régression spontanée des retentions. L'abstention, même dans les formes légères, risquerait de laisser s'installer une infection génitale et urinaire, plus fréquemment rencontrées dans les formes dépistées tardivement.

Le traitement se limite dans un grand nombre des cas au simple drainage de la poche en rétention.

L'excision circonférencielle totale de l'hymen risque d'entraîner une sclérose et une dyspareunie orificielle (28, 29). Elle est donc à éviter. L'hyménéotomie doit permettre un écoulement menstruel normal en essayant de respecter autant que possible la virginité de ces jeunes patientes surtout dans notre contexte social et d'assurer une vie sexuelle ultérieure normale en évitant la resténose. Pour cela, il faut respecter les orifices des glandes de Bartholin à 5 heures et à 7 heures et inciser à 11 heures en position gynécologique afin de libérer la berge inférieure du méat urinaire et d'assurer une désolidarisation méato-hyménéale. Plusieurs techniques chirurgicales sont proposées dans la littérature. Salvat (30) recommande la technique des incisions hyménéales radiaires étoilées qui est simple mais qui ne garantit pas la virginité. Une autre technique a été décrite par Ali et al (31). Elle consiste à exciser une petite collerette centrale de l'hymen à travers laquelle on introduit une sonde de Foley. Le ballonnet de la sonde est gonflé à 10 cm3. Cette sonde est ensuite retirée après 2 semaines. Cette technique nous a parue intéressante, car simple, moins invasive que les autres méthodes et préserve l'architecture normale de l'hymen. Le seul inconvénient relatif à cette technique est la gêne secondaire au port de la sonde pendant 2 semaines. Les résultats de cette technique sont plutôt encourageants : seules deux patientes sur 65 ont présenté une sténose hyménéale secondaire dans la série de Acar (31). Dans tous les cas, un contrôle clinique postopératoire doit être systématique pour vérifier l'absence de sténose secondaire,

Ceci dit, le meilleur traitement reste préventif, basé sur un diagnostic précoce de la malformation et sur une chirurgie entreprise après développement des organes génitaux mais avant l'apparition de l'hématocolpos.

Dans notre série les 3 malades ayant un hématocolpos sur une imperforation hyménéale ont bénéficié d'une incision de l'hymen en Y, l'évacuation de la collection hématique, et un drainage par une sonde laissée en place pendant 1 semaine à 10 jrs était de principe.

Toutes les patientes ont été mises sous une biantibiothérapie, les soins locaux pluriquotidiens, des séances de dilatation en fonction de l'évolution.

L'évolution dans les 3 cas d'imperforation hyménéale, était satisfaisante sans sténose post opératoire.

IV. Conclusion

Les imperforations hyménéales regroupent un ensemble de malformations génitales. C'est une affection souvent bénigne, d'évolution favorable, si elle est diagnostiquée et traitée précocement. A l'inverse sa méconnaissance, expose à des complications graves, menaçant le pronostic vital et compromettant sérieusement son avenir obstétrical. L'échographie reste l'examen de choix pour confirmer le diagnostic, et permet d'identifier un possible retentissement en amont et d'éventuelles anomalies urogénitales associées.

Le dépistage systématique à la naissance, et un traitement précoce sont les meilleurs garants de prévention des complications de cette pathologie Nous avons observé 3 hématocolpos secondaires à la méconnaissance d'un hymen imperforé. Les salles d'accouchement dans nos pays ne pouvant être accompagnées de pédiatres, l'information des sages-femmes, insistant sur l'examen systématique des nouveau-nés, permettra de reconnaître, à la naissance, les malformations, dont l'imperforation de l'hymen. Cela éviterait des situations d'urgence qui favorisent parfois des traitements inappropriés

Le traitement est exclusivement chirurgical et les voies d'accès diffèrent. Il demeure, le plus souvent, d'une remarquable simplicité et amène une guérison définitive.

References Références Referencias

1. Messina M ; Severi Fm ; Bocchi C ; et Al: Voluminous prénatal masse : a case f congénital hydrometrocolpos. J Matern Fetal Neonatal Med 2004; 15: 135.
2. Yanza MC, Sepou A, Nguembi E, Ngbale R, Gaunefet C, Nali MN: Hymen imperforé, diagnostic négligé à la naissance, urgence chirurgicale à l'adolescence. Schweiz Med Forum 2003; 44: 1063-1065.
3. Salvat J; Slamani L: Hématocolpos. J Gynécol Obstet Biol Reprod (Paris) 1998; 27: 396-402.
4. Heger AH, Ticson L, Guerra L, et al. Appearance of the genitalia in girls selected for nonabuse: review of hymenal morphology and nonspecific findings. J Pediatr Adolesc Gynecol 2002; 15: 27-35.
5. Walsh B, Shih R. An unusual case of urinary retention in a competitive gymnast. J Emerg Med 2006; 31: 279-81.
6. Battran VC:Mullerian anomalies and their management. Fertil steril 1983; 40:159-63.

7. Mall DJ: An usual case of urinary retention due to imperforate hymen. J Accid Emerg Med 1999; 16: 232.
8. Letts M, Haasbeek J: Hematocolpos as a case of back pain in premenarchal adolescents. J Pediatr Orthop 1990; 10:731.
9. Sakalkale R, Samarakkody U. Familial occurrence of imperforate hymen. J Pediatr Adolesc Gynecol. 2005;18:427-9.
10. Salvat J, Slamani L. Hématocolpos. J Gynécol Obstet Biol Reprod 1998;27:396-402.
11. Winderl LM, Silverman PK. Prenatal diagnosis of congenital imperforate hymen. Obstet Gynecol 1995; 85:857-60.
12. Rochet Y. les principales malformations génitales : Aspects thérapeutiques. Rev Fr Gyn Obstet 1986 ; 81 : 315-7
13. Adali E, Kurdoglu M, Yildizhan R, Kolusari A. An overlooked cause of acute urinary retention in an adolescent girl: a case report. Arch Gynecol Obstet 2009; 279: 701-3.
14. Paniel BJ, Truc JB. Diagnostic des malformations congénitales de la vulve et du vagin. Ann Pédiatr 1987; 34 : 11-25.
15. Emans SJ, Laufer MR, Goldstein DP. Dysmenorrhea, pelvic pain, and the premenstrual syndrome. In: Emans SJ, Laufer MR, Goldstein DP, eds. Pediatric and Adolescent Gynecology 5th ed. Philadelphia : Lippincott-Raven, 2004: 376-84.
16. Loscalzo IL, Catapano M, Loscalzo J, Sama A. Imperforate hymen with bilateral hydronephrosis : an unusual emergency department diagnosis. J Emerg Med 1995; 13: 337-9.
17. Yu TJ, Lin MC. Acute urinary retention in two patients with imperforate hymen. Scand J Urol Nephrol 1993; 27: 43-4.
18. Dane C, Dane B, Erginbas M, Cetin A. Imperforate hymen-a rare cause of abdominal pain: two cases and review of the literature. J Pediatr Adolesc Gynecol 2007; 20: 245-7.
19. Wort SJ, Heman-Ackah C, Davies A. Acute urinary retention in the young female. Br J Urol 1995; 13: 337-9.
20. Chang JW, Yang LY, Wang HH, Wang JK, Tiu CM. Acute urinary retention as the presentation of imperforate hymen. J Chin Med Assoc. 2007; 70: 559-61.
21. Einsenberg E, Faber M. Complete duplication of the uterus and cervix with unilateraly imperforate vagina. Obst Gynecol 1982; 60: 259-62.
22. Wang W, Chen MH, Yang W, Hwang DL. Imperforate hymen presenting with chronic constipation and lumbago: report of one case. Acta Paediatr Taiwan 2004; 45: 340-2.
23. Olive DL, Henderson DY. Endometriosis and mullerian anomalies. Obstet Gynecol 1987; 69: 412-5.
24. Rock JA, Zacur HA, Dlugi AM, et al. Pregnancy success following surgical correction of imperforate hymen and complete transverse vaginal septum. Obstet Gynecol 1982; 59: 448-51.
25. Liang CC, Chang SD, Soong YK. Long-term follow-up of women who underwent surgical correction for imperforate hymen. Arch Gynecol Obstet 2003; 269: 5-8.
26. Joki-Erkkilä MM, Heinonen PK. Presenting and long-term clinical implications and fecundity in females with obstructing vaginal malformations. J Pediatr Adolesc Gynecol 2003;16:307-12.
27. Robberecht E, Smets A, Wincker MV, Delens F. Radiological case of the month hematocolpos due to imperforate hymen. Arch Pediatr Adolesc Med 1996; 150: 993-4.
28. Chelli D, Kehila M, Sfar E, Zouaoui B, Chelli H, Chanoufi B. Imperforation hyménéale : peut-on la traiter en préservant la virginité. Santé 2008; 18: 83-87.
29. Salvat J, Slamani L. Hematocolpos. J Gynecol Obstet Biol Reprod 1998;27:396-402.
30. Ali A, Cetin C, Nedim C, Kazim G, Cemalettin A. Treatment of imperforate hymen by application of Foley catheter. Eur J Obstet Gynecol Reprod Biol 2003; 106: 72-5.
31. Acar A, Balci O, Karatayli R, Capar M, Colakoglu MC. The treatment of 65 women with imperforate hymen by a central incision and application of Foley catheter. BJOG 2007; 114: 1376-9.

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Ewing Sarcoma of Ovary-An Unusual Presentation

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Abstract- Ewing's sarcoma generally arises from bones and soft tissues. Primitive neuroectodermal tumor (PNET) and Ewing sarcoma constitute Ewing family of tumors. In International literature there have been rare reports of Ewing's sarcoma as either primary tumor of ovary or as metastatic disease involving ovary. No such case has yet been reported in Pakistan. Here a case is being presented who was diagnosed as Ewing's sarcoma of ovary. Workup showed no involvement of the bones.

Keywords: ewing's sarcoma, PNET, ovary.

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Ewing Sarcoma of Ovary-An Unusual Presentation

Humera Mahmood [α], Mohammad Faheem [σ], Sana Mahmood [ρ] & Sarosh Arif [ω]

Abstract- Ewing's sarcoma generally arises from bones and soft tissues. Primitive neuroectodermal tumor (PNET) and Ewing sarcoma constitute Ewing family of tumors. In International literature there have been rare reports of Ewing's sarcoma as either primary tumor of ovary or as metastatic disease involving ovary. No such case has yet been reported in Pakistan. Here a case is being presented who was diagnosed as Ewing's sarcoma of ovary. Workup showed no involvement of the bones.

Keywords: ewing's sarcoma, PNET, ovary.

I. Introduction

Ewing's sarcoma is malignant round blue cell tumor which primarily arises from bones involving pelvis, femur, tibia, humerus and clavicle. Patients affected are commonly in their second decade of life. The definitive diagnosis is based on histomorphology, immunohistochemistry and molecular pathology. The pathologic differential diagnosis is the grouping of small round cell tumors which include lymphoma, alveolar rhabdomyosarcoma and others. Ewing's sarcoma typically has clear cytoplasm on H & E staining due to glycogen. Positive PAS staining proves the presence of glycogen. The characteristic immunostain is CD99 which diffusely marks cell membrane. The morphologic and immunohistochemical characteristics are corroborated with chromosomal translocations of which t(11;22)(q24;q12) is the commonest present in about 90% of Ewing' sarcomas[1]. Ovary is very rare site to give origin to Ewing's sarcoma. Few cases of ovarian Ewing's sarcoma have been reported in literature mainly affecting females 18-30 years of age and in all these cases diagnosis was made with the help of immunohistochemistry. Cases of Ewing's sarcoma of uterus, vagina and vulva have also been reported[2]. We are reporting a case of 30year old lady who was diagnosed as having Ewing's sarcoma of ovary.

II. Case Report

A 30 year old, premenopausal lady having 4 children with last child birth 4 years back and no significant family history presented at NORI Islamabad on 19th February 2014. She had already undergone exploratory laparotomy on 12th December 2013. She presented to gynecologist with complaint of pain lower abdomen. Her Abdominal USG was done on 8th December 2013 which showed a large solid mobile mass in mid pelvis. The mass was not showing any relationship with major abdominal/pelvic organs. This was then followed by CT scan which showed a large well defined, smooth walled, complex soft tissue attenuation mass measuring 7.7x9.1 cm. The exact site of origin was difficult to ascertain on CT scan but it was probably in mesenteric fat. The lesion was mostly solid and differentials could be tumor of neural origin, lymphoma, GIST or carcinoid mass. There was additional finding of a suspicious mass in pelvis which was reported as either an adnexal mass or a nodal deposit (Fig A and B). This was then followed by exploratory laparotomy. CT scan report was not clear regarding the origin of pelvic mass. There were two masses peroperatively. One of the masses was measuring 4x4 cm and was related to posterior surface of uterus. The other mass measured 8x8 cm and was attached to fallopian tube. Excision of masses was done and histopathology showed Granulosa cell tumor of ovarian origin. Slide review was advised due to unusual presentation that was not in accordance with Granulosa cell tumor. Histopathology reviewed showed Ewing Sarcoma. Immunohistochemistry demonstrated positivity of CD99 and NSE thus endorsing the diagnosis of Ewing Sarcoma. Postoperative CT scan was done that showed minimal pelvic ascites. She was planned for chemotherapy but our patient was then lost to follow up. She presented again to our hospital in July 2014 with complaint of pain abdomen. On examination there was a huge mass palpable in lower abdomen lower limit of which was not reachable. On pervaginal examination a mass could be felt outside vagina in relation to its posterior wall. CT scan was repeated that showed a large lobulated mesenteric mass and a pelvic mass with rectal wall thickness (Fig C and D). The case was discussed in MDM and it was decided to give her chemotherapy followed by evaluation for surgery. Vincristine, Doxorubicin and Cyclophosphamide were started alternating with Ifosfamide and Etoposide. Interval assessment was done. Although there was reduction in size of mesenteric and pelvic mass,(Fig E and F) however, surgery was still not possible due to indistinct fat planes with rectum. Chemotherapy was continued till 17 cycles. Doxorubicin was replaced with Dactinomycin after 5 cycles of Doxorubicin. Recent CT scan showed further reduction in size of pelvic mass

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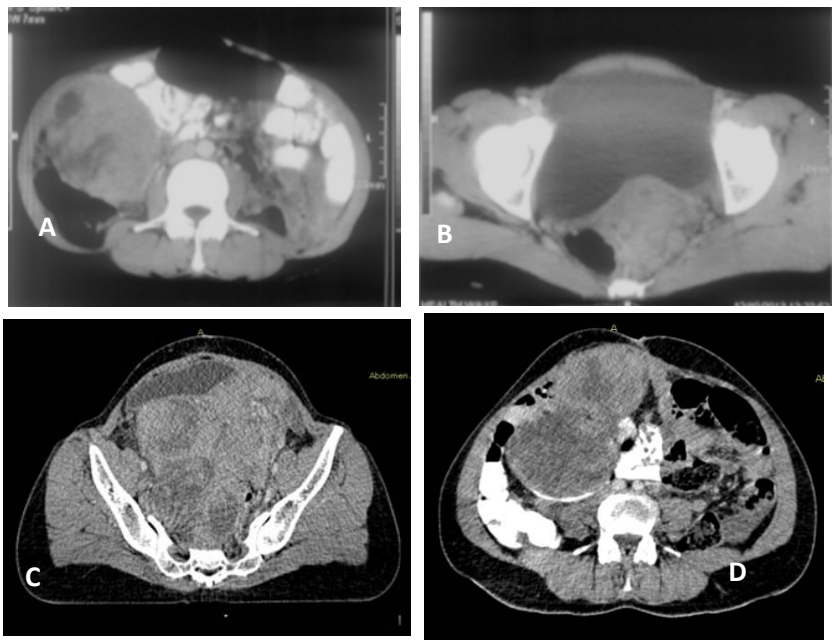
and resolution of mesenteric mass. Fat planes with rectum became distinct. Currently, she has been referred for surgery after discussion in MDM.

III. Discussion

Formerly thought to be dissimilar Ewing sarcoma and PNET are now considered to be same tumors that demonstrate variable degree of neuroectodermal differentiation. Ewing sarcoma lacks neuroectodermal differentiation whereas PNET expresses neuroectodermal differentiation when evaluated either by microscopy or IHC[3]. Extraosseous Ewing Sarcoma is a rare entity and that of female genital tract is extremely uncommon. The commonest site of PNET in female genital tract is ovary followed by uterus. The paucity of the disease can result in diagnostic dilemmas[4]. Our patient was also initially misdiagnosed as a case of Granulosa cell tumor of ovary. In her case not only histopathology was incorrect but also imaging studies were misleading. The site of origin and accurate diagnosis was determined only after review of histopathology and immunohistochemistry. Had the patient been discussed in multidisciplinary meeting prior to embarking on surgery, in view of extensive disease she could have been advised neoadjuvant chemotherapy after guided biopsy. Another appropriate approach might have been diagnostic laparoscopy. Ovarian PNETs are very aggressive tumors and are associated with extremely poor prognosis due to high incidence of metastatic disease. Median survival ranges from 10.8 months to 3 years. The prognosis of patients presenting with localized tumors has improved in recent years by means of multimodality treatment such as surgery, radiation and chemotherapy. Chemotherapeutic agents frequently used are vincristine, doxorubicin and cyclophosphamide alternating with Ifosfamide and doxorubicin[5]. Although optimal debulking was done in this particular case as evident by postoperative CT scan but she didn't come for adjuvant treatment resulting in local recurrence within 4-5 months of surgery. In a case report by Anfinan et al local recurrence in 31 years old female was seen during adjuvant chemotherapy with vincristine, doxorubicin and Ifosfamide alternating with vincristine, adriamycin and Ifosfamide. Cases of Ewing sarcoma already reported in literature were in 18 to 30 years age group[2] and our patient was also 30 years old. This shows that patients to be affected with ovarian Ewing sarcoma are relatively young. A number of chromosomal abnormalities are associated with PNET/Ewing sarcoma including deletion of Retinoblastoma gene, ras homologue member I and overexpression of N-myc, fas ligand, tumor necrosis factor and epidermal growth factor receptor. These factors may perhaps be responsible for aggressive nature of these tumors[6]. Due to non availability in Pakistan chromosomal abnormalities were not studiedin this patient but CD99 and NSE were strongly positive on Immunohistochemistry. Our patient has responded well to chemotherapy, whether this translates into better survival warrants further follow up.

IV. Conclusion

Although rare but Ewing sarcoma of ovary should be kept in differential diagnosis particularly in young patients having unusual presentation. Immunohistochemical markers should be applied for proper diagnosis. Here also comes importance of multidisciplinary meetings. Strong coordination is required among oncologists, gynecologists, radiologists and pathologists before putting the patient on any treatment modality.



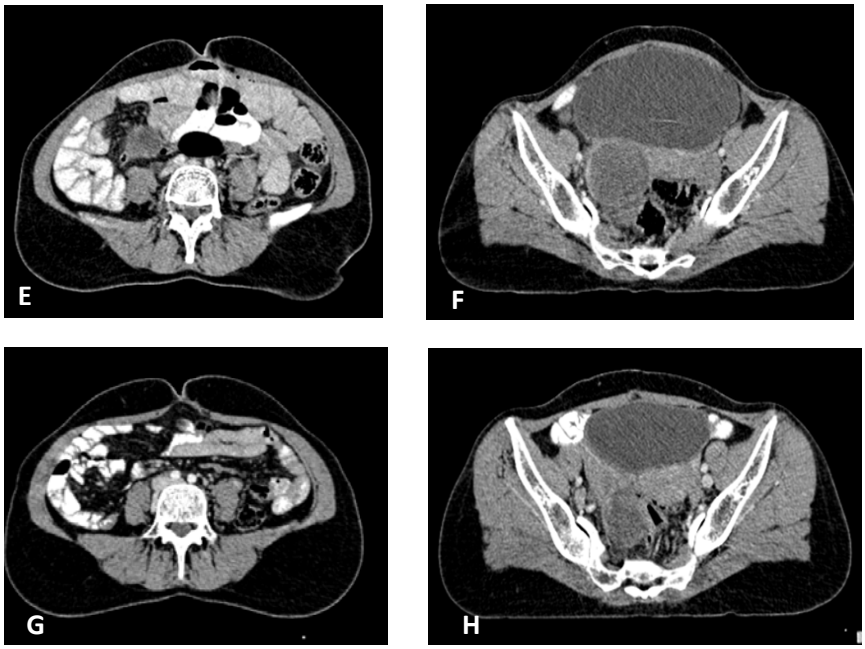


Fig A and B : Pre operative CT scan showing mesenteric mass and suspicious mass in pelvis.

Fig C and D : Pre chemotherapy CT scan showing recurrent mass in mesentery and huge pelvic mass.

Fig E and F : CT scan done after 6 cycles for interval assessment showing regression of masses.

Fig G and H : CT scan done after completion of chemotherapy showing resolution of mesenteric mass and further regression of pelvic mass

References Références Referencias

1. Richard J, Steven GD, Daphne AHK. Sarcomas of Bone. In: Devita VT, Lawrence TS, Rosenberg SA, editors. Cancer Principles & Practice of Oncology. 10th edition. Wolters Kluwer Lippincott: Williams and Wilkins; 2015. pp. 1293–1311.
2. Giuseppe L, Leonardo R, Edoardo DN, Anna MC, Salvatore AM, Mario V, et al. Conservative treatment of Ewing's sarcoma of uterus in young women. Case Rep Obstet Gynecol. 2015; 2015: http://dx.doi.org/10.1155/2015/871821.
3. YIP CM, HSU SS, Chang NJ, Wang JS, Liao WC, Chen JY, et al. Primary vaginal extraosseous ewing sarcoma/ primitive neuroectodermal tumor with cranial metastasis. J Chin Med Assoc. 2009; 72(6): 332-5.
4. Mashriqi N, Gujjarlapudi JK, Sidhy J, Zur M, Yalamanchili M. Ewing's sarcoma of cervix a diagnostic dilemma: a case report and review of literature. J Med Case Rep. 2015; 9(1): 225. DOI 10.1186/s13256-015-0733-2.
5. Kuk JY, Yoon SY, Kim MJ, Lee JW, Kim BG, Bae DS. A case of primitive neuroectodermal tumor of the ovary. Korean J Obstet Gynecol. 2012; 55(10): 777-81.
6. Anfinan NM, Sait KH, Al-Maghrabi JA. Primitive neuroectodermal tumor the ovary. Saudi Med J. 2008; 29(3): 444-6.

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Rising Trend of Caesarean Section in Rural India: A Prospective Study

By Dr. Deepti Shrivastava & Dr Priyakshi Chaudhry
JNMC, India

Introduction- The rate of caesarean section is constantly increasing beyond the recommended level of 5-15% by world Health Organization. Caesarean section is usually performed to ensure safety of the mother and child under conditions of obstetric risks. This medical intervention is more or less justified under certain circumstances such as breech presentation, dystocia, previous caesarean section and suspected fetal compromise.

Caesarean section rate varies in different places depending on type of care giver and type of facility. In the last decade, the rate has increased almost double. In developing countries like India too many women are undergoing caesarean section. This trend is rising in urban as well as in rural population of India. In 2010, the incidence was around 8.5% but a phenomenal increase of 40 % was seen in Kerala and Tamil Nadu .It is found that the low threshold for caesarean is becoming common in rural India as well.

GJMR-E Classification : NLMC Code: WJ 140

Strictly as per the compliance and regulations of:

Rising Trend of Caesarean Section in Rural India: A Prospective Study

Dr. Deepti Shrivastava [α] & Dr Priyakshi Chaudhry [σ]

I. Introduction

The rate of caesarean section is constantly increasing beyond the recommended level of 5-15% by world Health Organization. Caesarean section is usually performed to ensure safety of the mother and child under conditions of obstetric risks. This medical intervention is more or less justified under certain circumstances such as breech presentation, dystocia, previous caesarean section and suspected fetal compromise.[1]

Caesarean section rate varies in different places depending on type of care giver and type of facility. In the last decade, the rate has increased almost double. In developing countries like India too many women are undergoing caesarean section. This trend is rising in urban as well as in rural population of India. In 2010, the incidence was around 8.5% but a phenomenal increase of 40 % was seen in Kerala and Tamil Nadu .It is found that the low threshold for caesarean is becoming common in rural India as well.[2]

The factors which are responsible for this trend include increased institutional deliveries, inadequate use of electronic foetal monitoring, inadequate care and apprehension of patients as well as doctors. Unnecessary caesarean sections can increase the risk of maternal morbidity, neonatal death and neonatal admission to an intensive care unit and overall cost of health care. Moreover, in any antenatal women with previous caesarean section careful intrapartum monitoring is required to check for integrity of previous scar .This may not be possible for all specially those living in rural and underprivileged sector India. Therefore primary caesarean section should be planned very judiciously after critical evaluation of circumstances.

Our study is planned to introspect this sharp increase in the rate of caesarean section and to find out its determinants.

a) Aims and objectives

1. To analyse the current trend of caesarean section in rural India. .
2. To determine the factors responsible for caesarean section.

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II. Material and Method

This prospective study was carried out in Acharya Vinoba Bhave Hospital, Sawangi, Maharashtra, Department of Obs and Gynae from May 2015 to October 2015. Total 500 patients were consecutively selected. After taking consent, detailed past and present history was taken from all the cases, general and local examination was done on the day of LSCS. CPD (Cephalopelvic disproportion) was assesd mainly by clinical pelvimetry. Labour patients were monitored byplotting partogram. All the investigations Hb%, Blood grouping & Rh typing, urine R/E, obstetric USG was taken into account and in selected cases blood urea, s. creatinine, serum uric acid, SGPT and serum electrolyte done.

Blood/Donor was kept ready in selected cases such as placenta Previa. Detailed analysis of cases was done in terms of emergency/elective, type of LSCS, complications, high risk factors and other contributing factors in pre structured proforma. Stastical analysis was done by test of significance.

Exclusion criteria

- Previous caesarean section
- Conception after ART
- Estimated foetal weight more than 4 kg

III. Results

Distribution of cases according to the Age

AGE	NO OF CASES (N=500)	percentage
20years	45	9%
20-25 years	305	61%
26-30years	115	23%
Above 30 years	35	7%
EDUCATION		
Primary education	282	56.5%
Middle school	164	32.8%
High school	36	7.2%
Graduate	18	3.5%
Socio economic status		
Class 1	26	5%
Class 2	97	19.5%
Class 3	190	38%
Class 4	157	31.55%
Class 5	30	5.95%
occupation		
Home maker	205	41%
Manual labourer/Farm worker	223	44.6%
Office worker	72	14.4%

Table no 2) Distribution of cases according to Indications of Iscs

Indications	No of cases N=500	Percentage*
Fetal Distress	139	27.8%
Obstructed Labor	29	5.8%
Failed Progression Of Labor	30	6%
Pre labor rupture of membranes	30	6%
Bad Obstetric History	17	3.4%
Breech Presentation	28	15%
twins	5	1%
CPD	20	4%
Transverse Lie	4	0.8%
Face Presentation	6	1.2%
Brow Presentation	4	0.8%

Eclampsia	8	1.6%
Pre-Eclampsia	39	7.8%
Cord Prolapse	9	1.8%
Hydromnios	23	4.6%
IUGR	25	5%
Placenta Previa	3	0.6%
Abruption placenta	14	2.8%
Medical disorder(GDM)	7	1.4%
Previous surgery	12	2.4%
Mothers request	47	8.7%

**percentage differs due to multiple indicators*

IV. Results and Discussion

Caesarean section is used in cases in which vaginal delivery either is not feasible or would impose undue risk on mother or baby. Rising incidence can be explained by the fact that our hospital is a tertiary care centre and receives a good number of high risk emergency cases with inadequate or no antenatal care Most of the patient brought late in labour after being handled by untrained birth attendants and are actually and potentially infected, often anaemic and dehydrated. Early detection & early decision also increase the incidence of LSCS.

Analysis of age group shows that 84% patients belonged to age group of 20-30years, a study in IPGMR [3]showed 89% among this group and 77% in a study by Karim ET al[4]

In this study most common indication of cesarean section was fetal distress 27.8% which was similar to the study done by Patil et al[5] in 2011 the rate was 35% With the availability of early predictors of foetal wellbeing such as NST Machines, Foetal Doppler's, Biophysical profiles & the Foetal scalp blood pH estimations over diagnosis of foetal distress along with increased dependency on the machines may be one factor for increased rate of LSCS.

15% patients had breech presentation which was similar to study done by Karim et al[4] 9.8% and 6% by Nahar et al[6].

Failed progression of labour was reported in 6% cases which was similar to study of Nahar et al[6] 10%, 14.8% by Karim et al[4].

6% patients had pre mature rupture of membranes as the indicator 18.5% was seen in study by Karim ET al[4].

Malpresentation was indicator in 2.8% cases which was similar to study done by Nahar ET al[6] was 6%.

CPD was 4%, whereas in a study by Nahar ET al[6] it was 6%.

Amniotic fluid disorders particularly oligohydramnios were 4.6% culminating to caesarean section in our study whereas in study done by Patil ET al[5] the incidence in 2000 was 8% of total indications of caesarean section.

Eclampsia and pre-eclampsia as a primary indication for caesarean section was 9.4% in study by Patil et al[5] it was 7 % of total indications, in study by Nahar et al[6] was 12% and 6.32% in a study by Karim et al[4]. Rising Obesity, anaemia in rural area amongst the women can be considered one of the factors leading to Hypertension during the pregnancy.

Incidence of abruptio placenta, placenta Previa was 2.8% and 0.6% where as in study done by Patil ET al[5] it was 3-4%.

1.4% cases were reported to have medical disorders (GDM) whereas in study by Karim ET al[4] it was 15.7%.

Patients who were from class 5 of socio economic status or who were graduate and office workers had personal request of getting LSCS done which accounted for 8.7% because it was feasible and less time consuming and did not wanted to undergo so much trauma and did not want to take any risk.

V. Conclusion

In modern obstetrics, Caesarean section is a important surgical procedure for delivery, because of its low rate of maternal morbidity and mortality due to improved surgical technique and modern anaesthetic skill. The scheme like Janani Suraksha Yojana (JSY) may have a great impact on accepting institutional deliveries by poor women. Rising institutional delivery may be a reason of the increase of CS in India. Rising litigation, insurance, preterm caesarean section to salvage the premature babies in the era of modern

NICU facility & doctors anxiety are leading to the era of more operative deliveries.

References Références Referencias

1. Sancheeta Ghosh* and K.S James† Population Research Centre. Institute for Social and Economic Change (ISEC), Bangalore*
2. The ICMR School of Public Health. And it's happening across both urban and rural areas: Mumbai.
3. Zaman N. A clinical study on caesarian section in IPGMR (dissertation). Dhaka. Bangladesh College of Physicians & Surgeons; P 84-92.
4. Farah Karim, Asifa Ghazi, Tehmina Ali, Rukhsana Aslam, Uzma Afreen, Romana Farhat, Trends and Determinants of Caesarean Section. Journal of Surgery Pakistan (International) 16 (1) January - March 2011.
5. Dr Mithil M Patil, Dr Vandana Nimbrghi, Dr S. S. Mehndale, Trends of Cesarean Section At Tertiary Care Hospital In India Over 10 Years. Indian Journal of Applied Research.
6. Khairun Nahar, Indications of Caesarean Section - Study of 100 cases in Mymensingh Medical College Hospital. Journal of Shaheed Suhrawardy Medical College.

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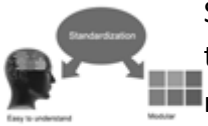

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Results:

The principle of a results segment is to present and demonstrate your conclusion. Create this part a entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Carry on to be to the point, by means of statistics and tables, if suitable, to present consequences most efficiently.You must obviously differentiate material that would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matter should not be submitted at all except requested by the instructor.

Content

- Sum up your conclusion in text and demonstrate them, if suitable, with figures and tables.
- In manuscript, explain each of your consequences, point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation an exacting study.
- Explain results of control experiments and comprise remarks that are not accessible in a prescribed figure or table, if appropriate.
- Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or in manuscript form.

What to stay away from

- Do not discuss or infer your outcome, report surroundings information, or try to explain anything.
- Not at all, take in raw data or intermediate calculations in a research manuscript.
- Do not present the similar data more than once.
- Manuscript should complement any figures or tables, not duplicate the identical information.
- Never confuse figures with tables - there is a difference.

Approach

- As forever, use past tense when you submit to your results, and put the whole thing in a reasonable order.
- Put figures and tables, appropriately numbered, in order at the end of the report
- If you desire, you may place your figures and tables properly within the text of your results part.

Figures and tables

- If you put figures and tables at the end of the details, make certain that they are visibly distinguished from any attach appendix materials, such as raw facts
- Despite of position, each figure must be numbered one after the other and complete with subtitle
- In spite of position, each table must be titled, numbered one after the other and complete with heading
- All figure and table must be adequately complete that it could situate on its own, divide from text

Discussion:

The Discussion is expected the trickiest segment to write and describe. A lot of papers submitted for journal are discarded based on problems with the Discussion. There is no head of state for how long a argument should be. Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implication of the study. The purpose here is to offer an understanding of your results and hold up for all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of result should be visibly described. Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved with prospect, and let it drop at that.

- Make a decision if each premise is supported, discarded, or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."
- Research papers are not acknowledged if the work is imperfect. Draw what conclusions you can based upon the results that you have, and take care of the study as a finished work
- You may propose future guidelines, such as how the experiment might be personalized to accomplish a new idea.
- Give details all of your remarks as much as possible, focus on mechanisms.
- Make a decision if the tentative design sufficiently addressed the theory, and whether or not it was correctly restricted.
- Try to present substitute explanations if sensible alternatives be present.
- One research will not counter an overall question, so maintain the large picture in mind, where do you go next? The best studies unlock new avenues of study. What questions remain?
- Recommendations for detailed papers will offer supplementary suggestions.

Approach:

- When you refer to information, differentiate data generated by your own studies from available information
- Submit to work done by specific persons (including you) in past tense.
- Submit to generally acknowledged facts and main beliefs in present tense.

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Introduction	Containing all background details with clear goal and appropriate details, flow specification, no grammar and spelling mistake, well organized sentence and paragraph, reference cited	Unclear and confusing data, appropriate format, grammar and spelling errors with unorganized matter	Out of place depth and content, hazy format
Methods and Procedures	Clear and to the point with well arranged paragraph, precision and accuracy of facts and figures, well organized subheads	Difficult to comprehend with embarrassed text, too much explanation but completed	Incorrect and unorganized structure with hazy meaning
Result	Well organized, Clear and specific, Correct units with precision, correct data, well structuring of paragraph, no grammar and spelling mistake	Complete and embarrassed text, difficult to comprehend	Irregular format with wrong facts and figures
Discussion	Well organized, meaningful specification, sound conclusion, logical and concise explanation, highly structured paragraph reference cited	Wordy, unclear conclusion, spurious	Conclusion is not cited, unorganized, difficult to comprehend
References	Complete and correct format, well organized	Beside the point, Incomplete	Wrong format and structuring

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