Dr. Ezedeen F Bahaaldeen
PhD, Consultant Gynecologist (2018) introduces by Dr. Wessam Masha'n 2019

Gynecological disorders

Objectives

At the end of this lecture the student should know :

1. The types of gynecological disorders, methods of diagnosis and medical and surgical treatment .
2. Differentiate between each type according to its causes.
3. Identify the types, causes of menstrual cycle disorders
4. The student can know what is the infertility and the most common causes in men and women.
5. Demonstrate knowledge of common types of Reproductive technology assistance infertility.

Uterine Prolapse

1- Anterior vaginal wall prolapsed

cystocele : Prolapsed of the upper part of the anterior vaginal wall with the base of the bladder .

urethrocele. Prolapsed of the lower part of the anterior vagina wall with the urethra

cysto-urethrocele: Complete anterior vaginal wall prolapsed .

Anterior vaginal wall prolapse

- Weakness in the

1. Supports of the bladder neck
2. Urethero vesical junction
3. Proximal urethra

- Caused by(Weakness of pubocervical fascia and pubourethral ligaments)

2- Uterine descent

Utero-vaginal (the uterus descends first, followed by the vagina): This usually occurs in cases of virginal and nulliparous prolapse due to congenital weakness of the cervical ligaments.

Vagino-uterine (the vagina descends first, followed by the uterus):This usually occurs in cases of prolapse resulting from obstetric trauma.

Degrees of uterine descent

1st degree: The cervix desends below its normal Ievel on straining but does not protrude from the vulva (The extemal os of the cervix is at the level of the ischial spines)

2nd degree: The cervix reaches upto the vulva on straining

3rd degree: The cervix protrudes from the vulva on straining

Procidentia- whole of the uterus is prolapsed outside the vulva and the vaginal wall becomes more completely inverted over it. Enterocele is usually present

Aetiology

- Erect posture causes increased stress on muscles, nerves and connective tissue
- Acute and chronic trauma of vaginal delivery
- Aging
- Estrogen deprivation
- Intrinsic collagen abnormalities
- Debilitation

- Iatrogenic

precipitating factors

- ↑ intra abdominal pressure
- ↑ weight of the uterus
- Traction of the uterus by vaginal prolapse or by a large cervical polyp
- Obesity(40%--75%)
- Smoking
- Pulmonary disease (chronic coughing)
- Constipation (chronic straining)
- Recreational or occupational activities
  (frequent or heavy lifting)

Symptoms of Prolapse

Pelvic floor disorders become symptomatic through either of two mechanisms:

1. Mechanical difficulties produced by the actual prolapse,

2. Bladder or bowel dysfunction, disrupting either storage or emptying.

Clinical presentation

- Before actual prolapse. the patient feels a sensation of weakness in the perineum. particularly towards the end of the day
- Later the patient notices a mass which appears on straining. and disappears when she lies down
- Urinary symptoms are common and trouble some even with slight prolapse:

a) Urgency and frequency by day

b) Stress incontinence

c) Inability to micturate unless the anterior vaginal wall is pushed upwards by the patient's fingers

d) Frequency when cystitis develops

- **Rectal symptoms** are not so marked. The patient always feels heaviness in the rectum and a constant desire to defaecate. Piles develop from straining.
- **Backache, congestive dysmenorrhoea and menorrhagia** are common.

- **Leucorrhoea** is caused by the congestion and associated by chronic cervicitis.
- Associated decubitus ulcer may result in discharge which may be purulent or blood stained

Treatment

Physiotherapy

1. Kegel's pelvic floor exercise
- ➢ Kegel's perineometer
- ➢ Influence only the voluntary muscles
- ➢ No action to the fascia supporting system
2. Vaginal cones of increasing weight .

Associated decubitus ulcer

3. To relieve congestion, the prolapse can be reposited in the vagina with the help of tampons or pessary and this helps in the healing of the ulcer
4. Hygroscopic agents like acriflavin-glycerine can help reduce the congestion further

Pessary

Indication for use:

- ➢ During pregnancy
- ➢ Immediately after pregnancy, during lactation
- ➢ When future childbearing is intended in the near future
- ➢ Refusing to operate by the patient
- ➢ As a therapeutic test
- ➢ To promote healing in a decubitus ulcer

1. **Complications of pessary**
2. Constipation
3. Urinary incontinence
4. B.vaginitis, ulceration of vaginal wall
5. Cervicitis
6. Carcinoma of vaginal wall
7. Impaction of pessary
8. Strangulation of prolapsed tissue

Principles of Management

- ➢ Physical examination must not be used in isolation to develop treatment strategy.
- ➢ Any decision for surgical intervention should take account of how prolapse is affecting lifestyle.

Uterine descent- surgeries

1. Vaginal hysterectomy
2. Sling surgeries
- Shirodkar
- Khanna’s
- Purandares
3. Fothergill’s surgery

Disorders Of The Menstrual Cycle

1-Secondary amenorrhea
causes

- Previously normal menstrual cycles
- Absence of menses for 6 months
- Or for a length of time = 3 previous cycles
- Multiple causes
- Hormonal
- Anatomical

Cont.

- Common non-pathological causes
- Pregnancy
- Lactation
- Hormonal contraception
- Menopause
- Always rule out pregnancy

Secondary Amenorrhea

1. **Recent Surgery Assess Anatomic Anomalies**
- Asherman’s syndrome
- Destruction of endometrium
- Surgery, pregnancy,
- Infection
- No cramps
- Cervical stenosis
- History of cervical surgery
2. **Hypothalamic Dysfunction FSH/LH**
- **Decreased or Normal**

- Anorexia nervosa
- Excessive exercise
- Stress
- Hypothalamic lesion
- Drugs/medications

3. **Pituitary Dysfunction FSH/LH**

- Pituitary dysfunction often result of increase of prolactin
- Hyperprolactinemia
- Hypothayroid
- TRH elevated prolactin
- Drugs (CNS)
- Pituitary adenoma
- Pituitary anatomical pathology rare
- Sheheen’s syndrome

Overt Hyperprolactinemia

Galactorrhea lead to increase of Prolactin and dcreases of FSH/LH

- Multiple duct, milky nipple discharge
  Cause
- Increased prolactin
- Etiology
- Physiologic
- Excessive breast manipulation
- Pharmacologic –Phenothiazines, Antihypertensive,Antidepressants, Amphetamines
- Oral contraceptives
- Marijuana

4. **Ovarian Dysfunction FSH/LH**

- Premature ovarian failure
- 40 years or less
- Post irradiation or cheamotherapy
- Polycystic ovarian syndrome common cause
- Polycystic Appearing Ovary

Secondary Dysmenorrhea

Causes

- Non-progesterone IUD
- Endometriosis
- Pelvic inflammatory disease
- Cervical stenosis
- Degenerating fibroids

2-Menorrhagia

- **Causes of Menorrhagia**

- Fibroids
- Adenomyosis
- Prostaglandin imbalance
- Non-hormonal IUD
- Clotting disorders
- Submucosal

3- Metrorrhagia

- Bleeding at irregular, but frequent intervals
- Amount is variable
- Unpredictable, often painless
- Irregular, irregularity

- **Causes of Metrorrhagia**

1. Dysfunctional uterine bleeding
2. Polycystic ovarian syndromae
3. Endometrial cancer
4. Progesterone
5. contraceptive

4- Menometrorrhagia

Prolonged bleeding occurring at irregular intervals both between and during menses

Caused by combinations of above pathologies

5- Polymenorrhea

Uterine bleeding occurring

at regular intervals less than 21 days

Causes:

1. Short follicular phase
2. Inadequate luteal phase
3. Dysfunctional uterine bleeding

6- Oligomenorrhea

Infrequent uterinebleeding with menstrual intervals greater than 35 days

Causes:

1. Menopause
2. Adolescence
3. OCP manipulation
4. Hypothalamic dysfunction
5. Chronic illness
6. Polycstic ovary

7- Hypomenorrhea

Unusually light flow at regular intervals

Causes

1. Oral contraceptive pills
2. Hormonal contraception

Infertility

Definition

Refers to the inability of couples to conceive a clinical pregnancy after 1 year or more of trying.

Failure to conceive within 2 years of regular unprotected intercourse.

Types of infertility

Resolved infertility (pregnancies that occur after 1 year of trying without medical intervention)

Primary infertility (never pregnant)

Secondary infertility: failure to conceive after having previously delivered an infant without the use of infertility treatment.

Fecundability*:* refers to the probability of becoming pregnant in a single menstrual cycle, conditional on not being pregnant in the previous cycle

Impaired fecundity*:* has been defined as physical difficulty in getting pregnant or carrying a pregnancy to term birth.

Causes of infertility

A-male infertility

1- Impaired production or function of sperm

- Impaired shape or movement of sperm.
- Low sperm concentration.
- Varicocele.
- Undescended testicle.
- Testosterone deficiency (male hypogonadism).
- Genetic defects.
- Infections.

2- Impaired delivery of sperm

- Sexual issues
- Retrograde ejaculation
- Blockage of epididymis or ejaculatory ducts.
- No semen (ejaculate)
- Hypospadia
- Anti – sperm antibodies
- Cystic fibrosis

3- General health and lifestyle

- Emotional stress
- Malnutrition
- Obesity
- Cancer and its treatment
- Alcohol and drugs
- Age
- Other medical conditions

3- Environmental exposure

- Pesticides and other chemicals
- Overheating the testicles
- Substance abuse
- Tobacco smoking

B- Female infertility

1- Fallopian tube damage or blockage

- Pelvic inflammatory disease
- Previous surgery in the abdomen or pelvis, including surgery for ectopic pregnancy.
- Pelvic tuberculosis
- Tubal adhesion
- Absence of fimbriated end of tube

2- Endometriosis

3-Ovulation disorders

- Polycystic ovary syndrome (PCOS)
- Hypothalamic dysfunction
- Premature ovarian insufficiency

4-Hyperprolactinemia

5-Early menopause

6-Uterine fibroids

7-Pelvic adhesions

8-Cervix stenosis

Risk factors

- Age
- Tobacco smoking
- Alcohol use
- Being overweight
- Too much exercise
- Caffeine intake

Tests and diagnosis

1-Tests for men

1. General physical examination
2. Hormone testing
3. Transrectal and scrotal ultrasound

Semen analysis includes

Volume	>2ml
PH	7-8
Concentration	>20 x 106/ml
Motility	>50% forward >25% with rapid linear progress
Morphology	> 15% normal
A live	> 50%
Anti-sperm antibodies	Negative
White cell count (WCC)	< 1x106

Tests for women

1. Ovulation testing

2. Hysterosalpingography
3. Laparoscopy
4. Hormone testing
5. Ovarian reserve testing
6. Genetic testing
7. Pelvic ultrasound

Treatment

Medical treatment

1- Fertility restoration: Stimulating ovulation with fertility drugs

Clomiphene citrate. (Clomid, Serophene).

Gonadotropins. Ovidrel, Pregnyl; act to stimulate production of multiple eggs

Metformin (Glucophage, others) is used when insulin resistance is a known or suspected cause of infertility, usually in women with a diagnosis of PCOS

Letrozole (Femara)

Bromocriptine (Parlodel, Cycloset) may be used when ovulation problems are caused by excess production of prolactin (hyperprolactinemia) by the pituitary gland.

Surgical treatment

Laparoscopic or hysteroscopic surgery

Tubal ligation reversal surgery (microscopic).

Tubal surgeries

Reproductive assistance

***In vitro* fertilisation (IVF)**

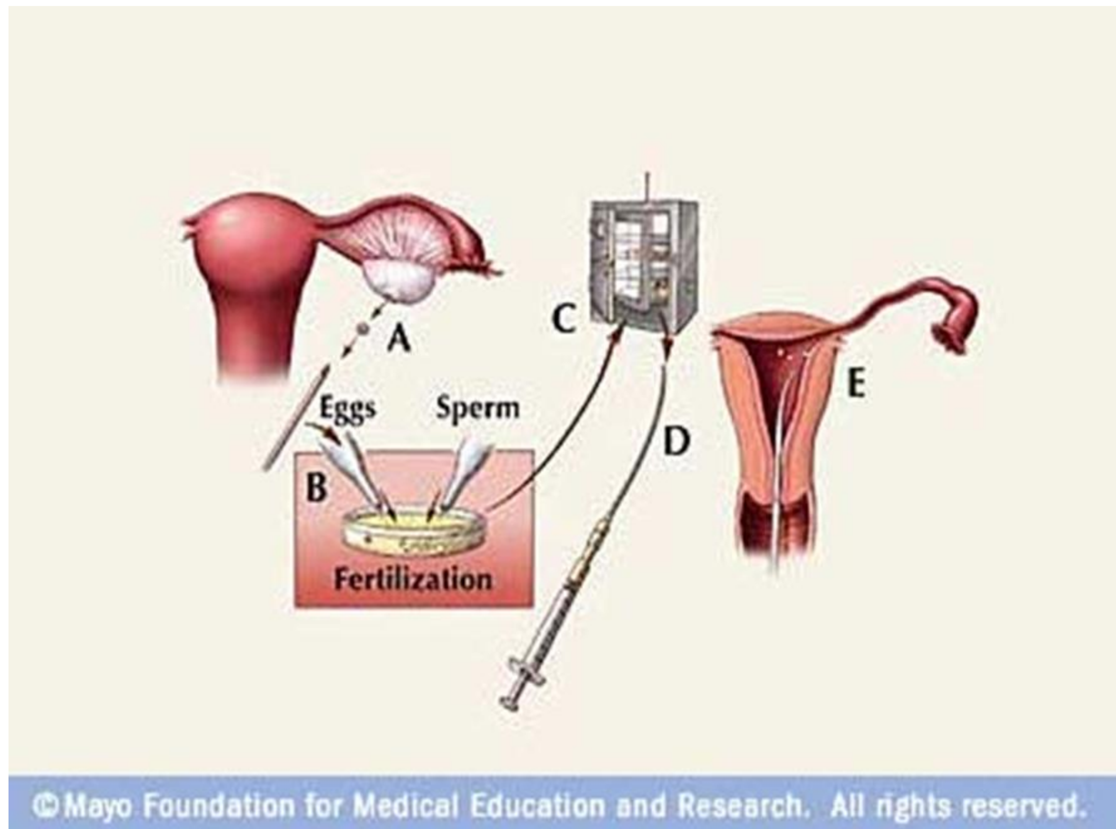
PGD Increasingly used with IVF

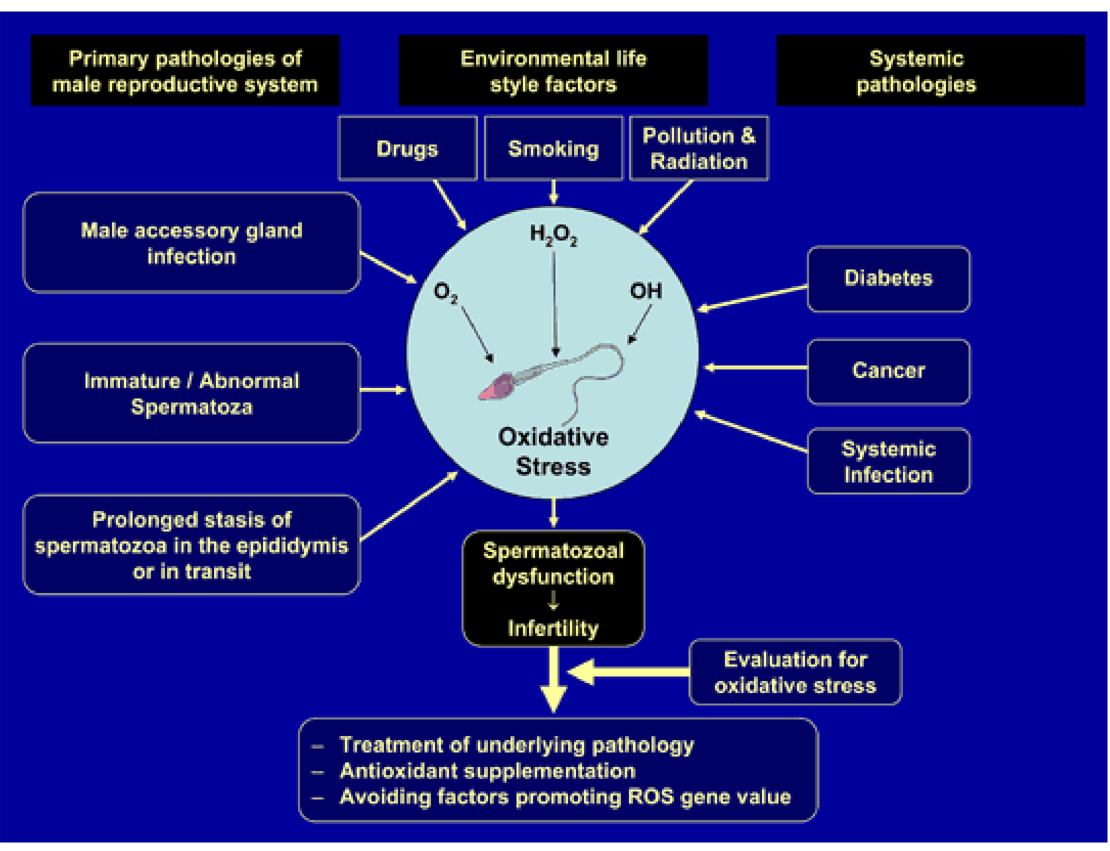
Pre implantation genetic diagnosis (PGD) is being used increasingly at the Fertility Institutes to dramatically improve the chance of a successful IVF pregnancy in couples where prior IVF failures have remained unexplained. It has been estimated that over half of all IVF failures are not able to be explained by an apparent problem with embryo "quality".

What is ICSI?

1. ICSI is an acronym for intracytoplasmic sperm injection
2. A fancy way of saying "inject sperm into egg"

3. ICSI is a very effective method to fertilize eggs in the IVF lab after they have been aspirated from the female
4. Its main use is for significant male infertility cases





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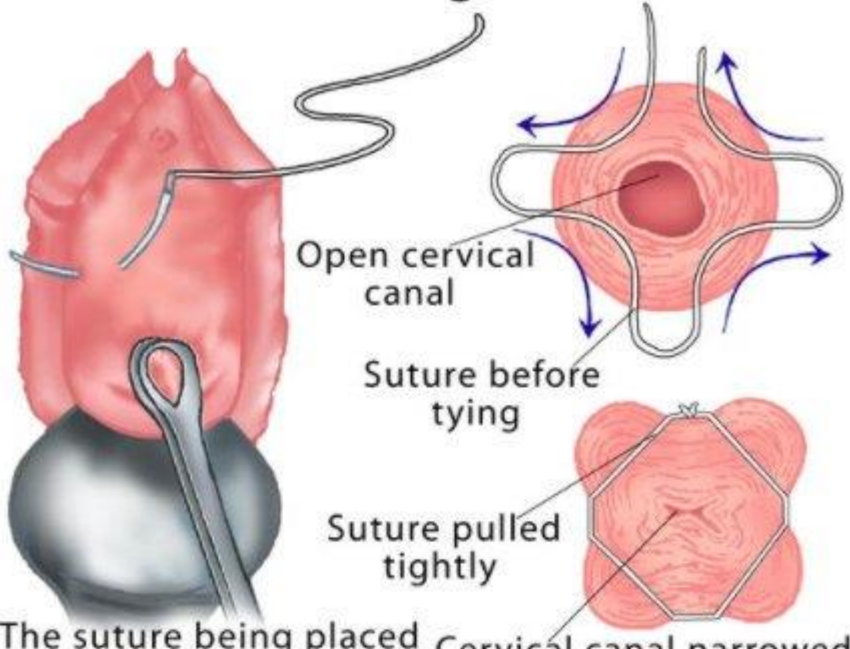
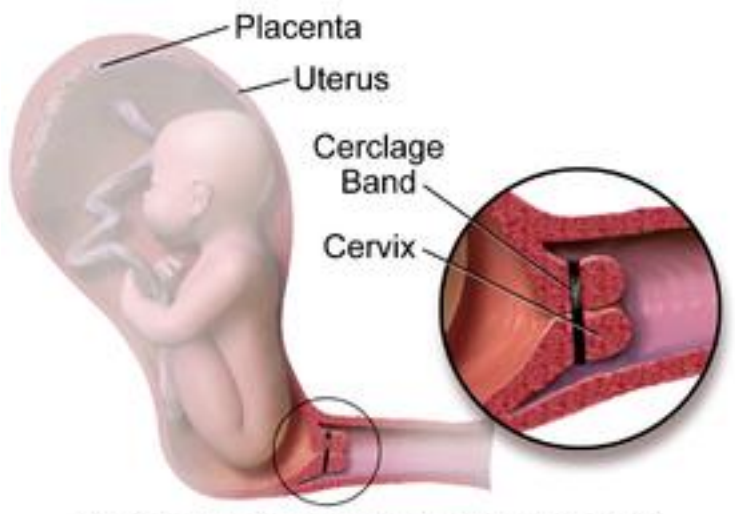
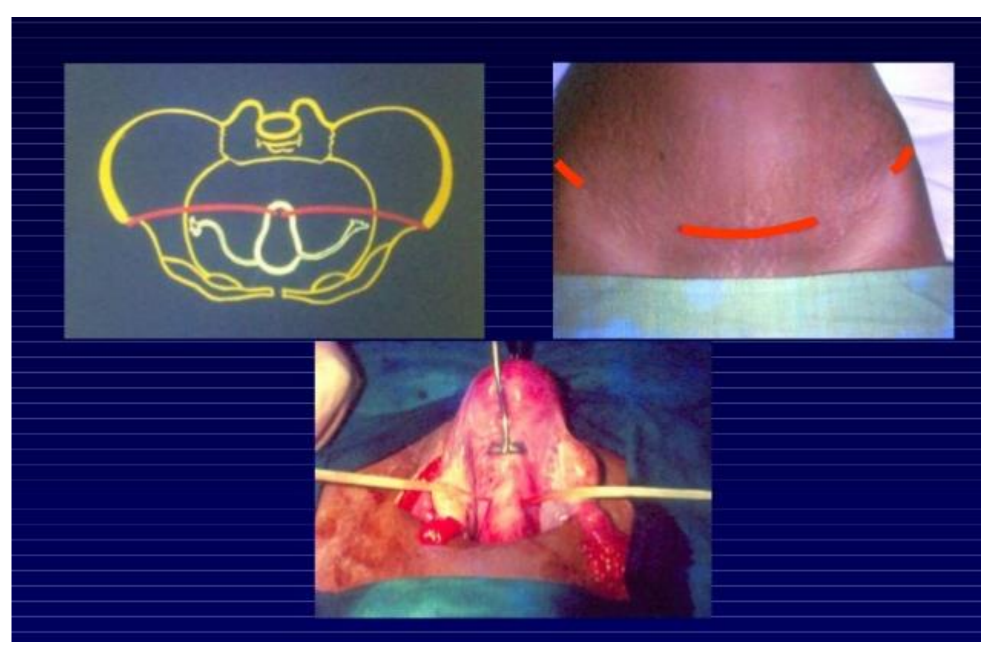
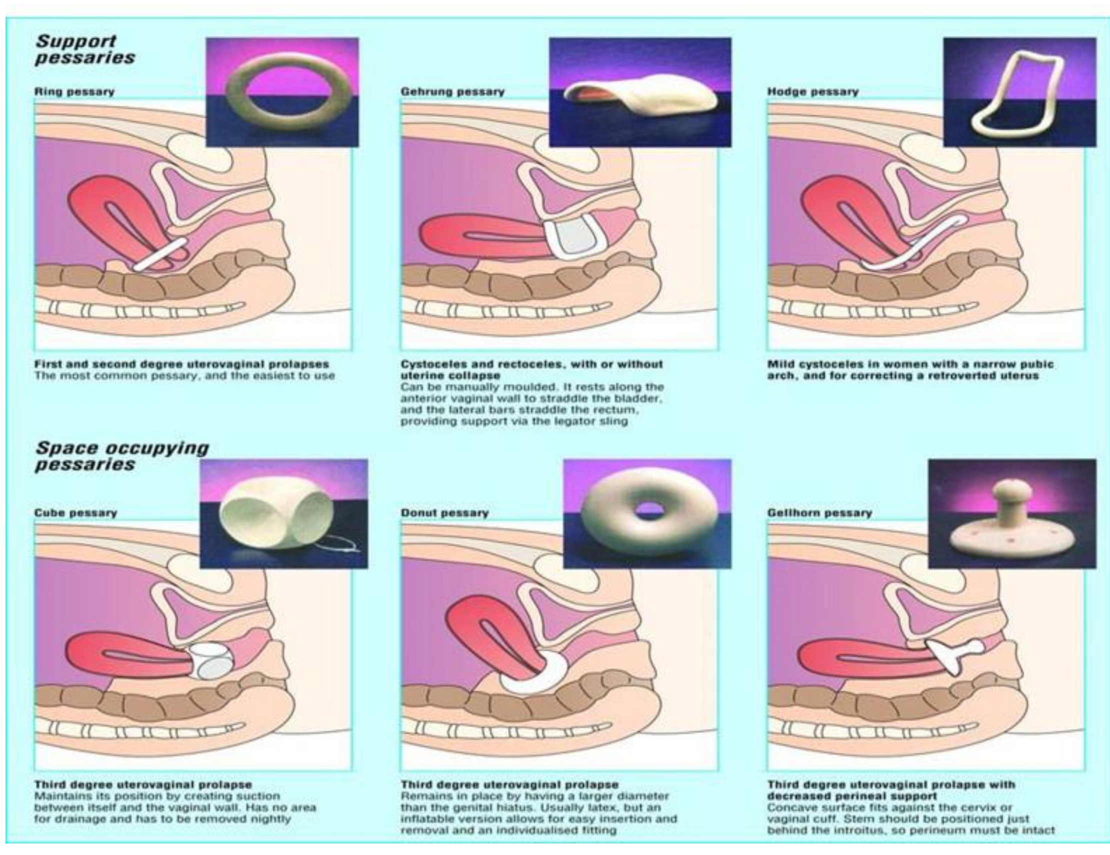

Cervical Cerclage Procedure
Open cervical canal
Suture before tying
Suture pulled tightly
The suture being placed around the open cervix
Cervical canal narrowed after tying the string


Placenta
Uterus
Cerclage Band
Cervix
Cerclage Correction of the Cervix




Support pessaries
Ring pessary
First and second degree uterovaginal prolapses
The most common pessary, and the easiest to use
Gehrung pessary
Cystoceles and rectoceles, with or without uterine collapse
Can be manually moulded. It rests along the anterior vaginal wall to straddle the bladder, and the lateral bars straddle the rectum, providing support via the legator sling
Hodge pessary
Mild cystoceles in women with a narrow pubic arch, and for correcting a retroverted uterus
Space occupying pessaries
Cube pessary
Third degree uterovaginal prolapse
Maintains its position by creating suction between itself and the vaginal wall. Has no area for drainage and has to be removed nightly
Donut pessary
Third degree uterovaginal prolapse
Remains in place by having a larger diameter than the genital hiatus. Usually latex, but an inflatable version allows for easy insertion and removal and an individualised fitting
Gellhorn pessary
Third degree uterovaginal prolapse with decreased perineal support
Concave surface fits against the cervix or vaginal cuff. Stem should be positioned just behind the introitus, so perineum must be intact

Normal
Female Pelvic Anatomy

Cystocele Prolapse

Uterus
Rectum
Bladder
Urethra
Vagina
Cystocele

Normal
female pelvic anatomy

Urethrocele with
moderate cystocele

Uterus
Rectum
Bladder
Urethra
Vagina
Urethral
prolapse
Bladder prolapse

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