



Infertility

Samir Fouad Khalaf

Professor OBGYN Al-Azhar
University

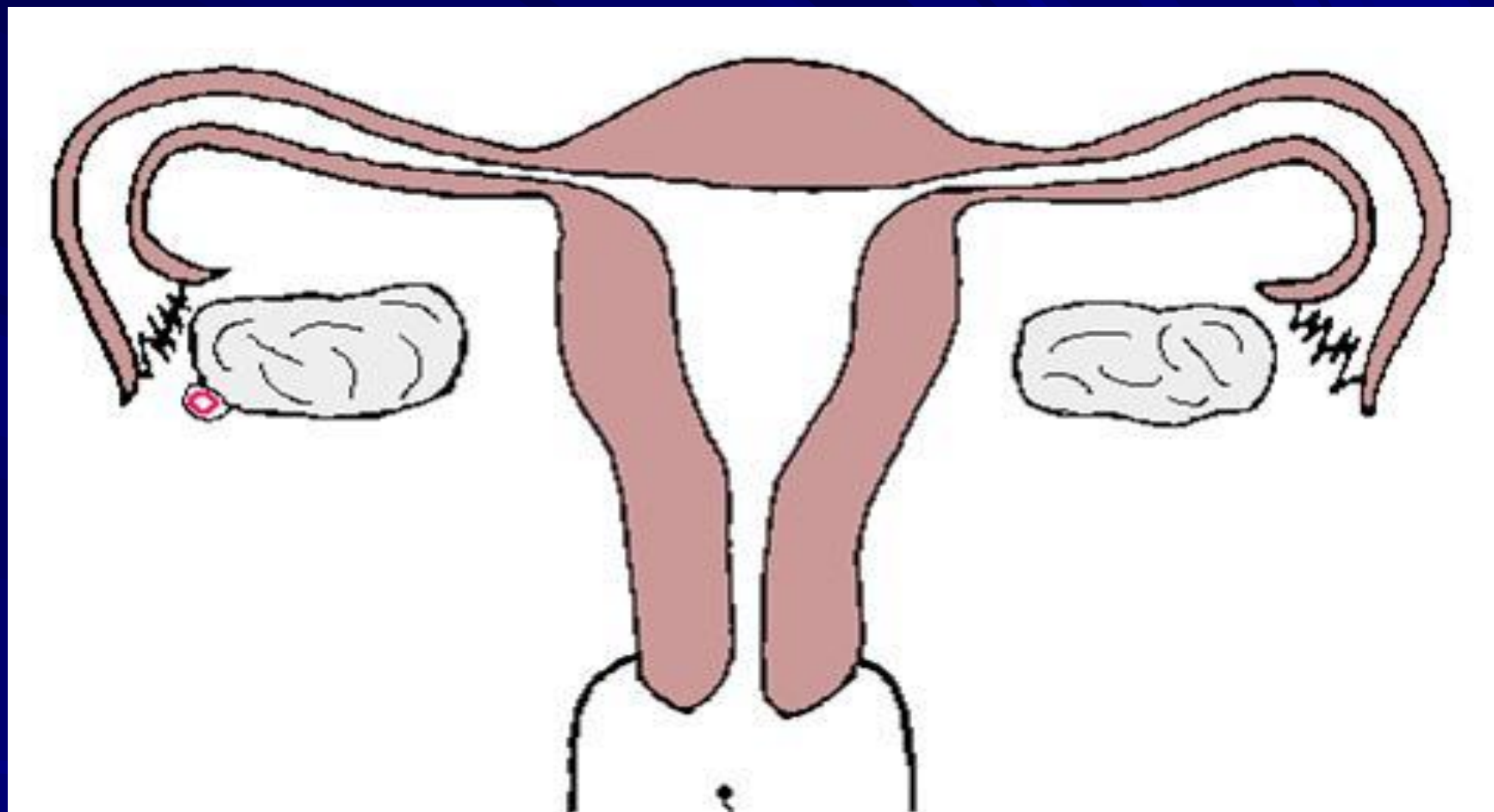
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Definition

- Inability to conceive after one year of continuous marriage without use of contraception
- Primary: refers to couples who have never established a pregnancy
- Secondary: couples who have conceived before but currently unable to establish a subsequent pregnancy
- Incidence 10% of couples

Factors Involved in Infertility

- * Spermatogenesis (male factor)
- * Ovulation (ovarian factor)
- * Mucus and sperm interactions (cervical factor)
- * Endometrial integrity and cavity size and shape (uterine factor)
- * Oviductal patency and anatomic relationships to the ovary (tubal factor)
- * Insemination (coital factor)



Male Factor

■ Semen analysis

Abstinence of intercourse for 4days

- Volume 2.5-6ml
- Count more than 20 millions
- Motility >75%
- Morphology >40% normal

Male Factor

■ Postcoital Test

Mucus examined for sperms 2-6 hours after coitus with high power field

- Satisfactory 6 or more motile sperms
- No spermatozoa are seen
- The majority of sperms are immotile
- Very few sperms are present
- Motility is characterized by shaking movement
- Hostile cervical mucus (dead sperms)

Male Factor

- Sperm antibodies
- May be present in the male or female and may be measured in:
 - Seminal plasma
 - Male serum
 - Female reproductive tract fluids
 - Female serum

Male Factor

- Tests of fertilizing capacity of spermatozoa
- Test the ability of sperm to fertilize ovum
 - Measurement of acrosin
 - Zona-free hamster ovum penetration test
 - Human ovum fertilization test

Coital Factor

- Coital dysfunction can be studied by:
 - Taking history of coital frequency and use of adjuvant (creams, jellies, or douches)
 - Anatomic evaluation of the position of the cervix with relationship to vagina
 - Postcoital test

Cervical Factor

- Abnormalities of the cervix or cervical mucus that interfere with sperm migration include:
 - Abnormal position of cervix (prolapse)
 - Chronic infection which may produce unfavorable mucus e.g. strept., staph, Gardnerella
 - Colonization with organisms that are cytotoxic to sperm e.g. urea plasma
 - Previous cervical surgery e.g. conization that lead to mucus depletion
 - Previous electrocautery
 - Presence of sperm antibodies

Cervical Factor

- Mucus quality can be assessed by physical, biochemical and physiological parameters
 - pH alkaline 8
 - Bacteriologic culture for microorganism
 - Crystallization (ferning) and spinnbarkeit (thread formation) of midcycle mucus
 - Serologic tests for antibodies
 - Postcoital test

Uterine Factor

■ Evaluation

- Endometrial sampling for histology by biopsy .detect ovulation, corpus luteum insufficiency and endometritis
- Endometrial culture to identify organisms in cases of endometritis
- HSG visualize cavity
- Hysteroscopy detect anomalies, polyps,tumors, or adhesions
- Laparoscopy to detect and delineate anomalous uterine development or myomata

Tubal Factor

■ Tests to evaluate tubal factor

Patency and location with respect to ovary

- Hystrosalpingography
- Laparoscopy
- Tubal insuflation ..obsolete

Ovarian Factor

- Documentation of ovulation
- Direct....impractical
 - Observation of ovulation by laparoscopy
 - Recovery of ovum
 - Establishment of pregnancy

Indirect

- Basal body temperature
- Progesterone level
- Endometrial biopsy

Therapy

■ Correction of male factor

*Medical

- Correction of deficiencies e.g thyroid disorders, excess prolactin
- Artificial insemination

*Surgical

Varicocele surgery

Therapy

■ Correction of coital factor

- Psychotherapy
- Sexual therapy
- Artificial insemination

Therapy

■ Correction of cervical factor

- Low dose estrogen
- Antibiotics
- AIH
- Corticosteroid for antisperm antibodies
- IVF

Therapy

■ Correction of uterine factor

*Medical

- Antibiotic for endometritis
- High dose estrogen after removal of adhesions

*Surgical

- Myomectomy
- Metroplasty in certain anomalies
- Removal of intrauterine synechiae

Therapy

■ Correction of Tubal factor

- Adhesiolysis
- Tubal anastomosis for reversal of sterilization
- Salpingoplasty for blocked tubes
- IVF

Therapy

- Correction of ovarian factor
- Induction of ovulation
 - Correction of underlying endocrine disorder such as thyroid dysfunction
 - Clomiphene citrate to correct hypothalamic dysfunction
 - HMG
 - Bromocryptine for anovulation due to excess prolactin
 - Glucocorticoids for androgen excess due to adrenal hyperplasia
 - Correction of luteal phase defect
 - postovulatory progesterone
 - clomiphene citrate -HMG

Unexplained Infertility

- No apparent cause after all investigations

- IVF

- GIFT

- ZIFT

- ICZI

