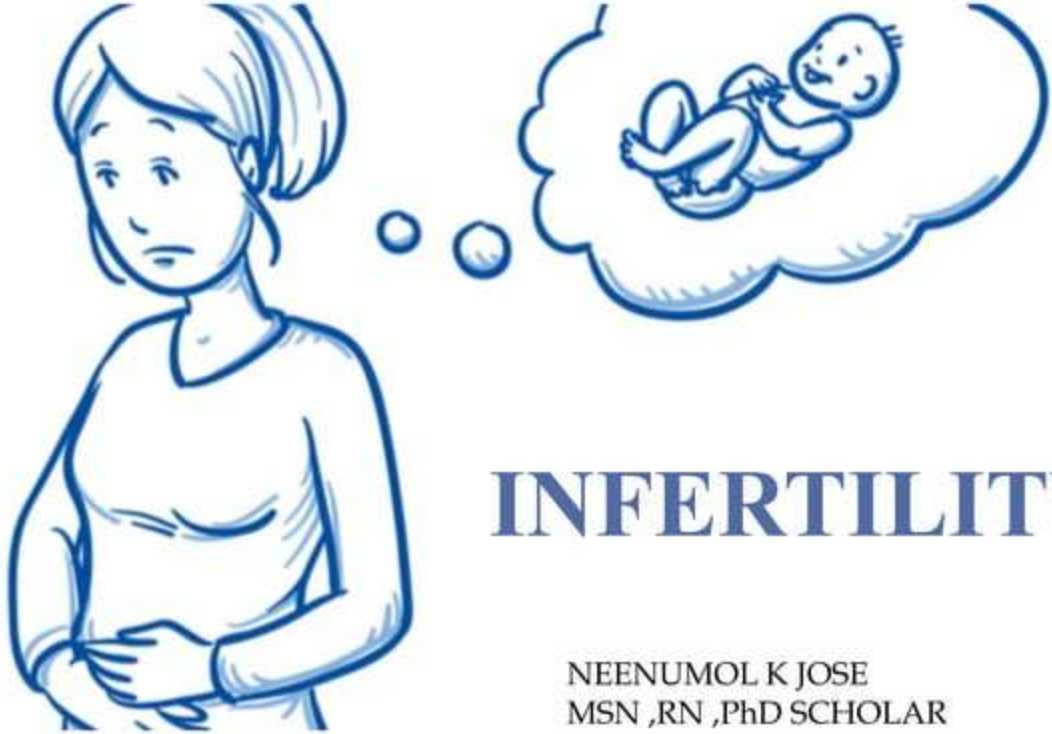

INFERTILITY

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INTRODUCTION:-

- Infertility is the inability of a person, animal or plant to reproduce by natural means.
- In humans, infertility is the inability to become pregnant after one year of intercourse without contraception involving a male and female partner.
- Currently, female fertility normally peaks at age 24 and diminishes after 30, with pregnancy occurring rarely after age 50.
- Male fertility peaks usually at age 25 and declines after age 40

DEFINITION

"Infertility is "a disease of the reproductive system , the failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse".

(WHO)

"Infertility is defined as a couple's inability to achieve pregnancy after 1 year of unprotected intercourse".

(Brunner and Suddarths)

INCIDENCE

Many more couples, however, experience involuntary childlessness for at least one year: estimates range from 12% to 28%.

Male infertility is responsible for 20–30% of infertility cases, while 20–35% are due to female infertility, and 25–40% are due to combined problems in both parts.

In 10–20% of cases, no cause is found.

TYPES OF INFERTILITY:-

PRIMARY INFERTILITY

It Denotes Those Patient Who Have Never Conceived.

SECONDARY INFERTILITY

Secondary infertility means that at least one conception has occurred, but currently the couple cannot achieve a pregnancy

CAUSES:-

- **IN THE MALE**

1. Defective Spermatogenesis
2. Obstruction Of The Efferent Duct System
3. Failure To Deposit Sperm In The Vagina.
4. Errors In The Seminal Fluid.

IN THE FEMALE

- Ovarian Factor
- Tubal Factors
- Uterine Factor
- Cervical Factor
- Vaginal Factors

1. Ovarian Factor :-

The Ovulatory Dysfunctions Encompass :-

- Anovulation Or Oligo-Ovulation
- Luteal Phase Defect(LPD)
- Luteinised Unruptured Follicle(LUP)

2. TUBAL FACTOR :-

The Impaired Tubal Function Includes Defective Ovum Picks Up , Impaired Tubal Motility,Loss Of Cilia & Partially To Complete Obstruction Of The Tubal Lumen.

3. UTERINE FACTORS :-

The Possible Factors That Hinder Indication Are Uterine Hypoplasia Inadequate Secretory Endometrium, Fibroid Uterus, Endometritis, Congenital Malformation Of Uterus.

4.CERVICAL FACTOR :-

Anatomic Defects Preventing Sperm

Ascent May Be Due To Congenital Elongation Of The Cervix,Second Degree Uterine Prolapse And Acute Retroverted Uterus..

5. VAGINAL FACTOR :-

Atresia Vagina, Transverse Vaginal

Septum Separate Vagina Causing Dyspareunia

& Vaginitis

DIAGNOSTIC EVALUATION

Careful evaluation includes

physical examination,

endocrinologic investigation, and

consideration of psychosocial factors.

Three complete histories (one of each partner and one of the couple),

laboratory studies are performed on both partners to rule out such causative factors as previous STDs, anomalies, injuries, tuberculosis, mumps, impaired sperm production, endometriosis, or antisperm anti- bodies.

Five factors are considered basic to infertility: ovarian, tubal, cervical, uterine, and semen conditions.

MALE:-

- HISTORY TAKING
- PHYSICAL EXAMINATION
- ROUTINE INVESTIGATION
- SEMINAL FLUID ANALYSIS
- TESTICULAR BIOPSY.
- IMMUNOLOGICAL TEST.

FEMALE

1. ***HISTORY TAKING***

- ✓ MEDICAL HISTORY
- ✓ SURGICAL HISTORY
- ✓ MENSTRUAL HISTORY
- ✓ PREVIOUS OBSTETRIC HISTORY
- ✓ CONTRACEPTIVE PRACTICE
- ✓ SEXUAL PROBLEMS

2.EXAMINATION

- **GENERAL EXAMINATION :-**

  SPECIAL EMPHASIS BEING GIVEN TO –

- OBESITY
- MARKED REDUCTION IN WEIGHT
- ABNORMAL DISTRIBUTION OF HAIRS
- UNDEVELOPMENT OF SECONDARY SEX CHARACTERS ARE NOTED.

▪SYSTEMIC EXAMINATION

ACCIDENTALLY DETECT SUCH ABNORMALITIES LIKE –

- HYPERTENSION
- ORGANIC HEART DISEASE
- CHRONIC RENAL LESION
- ENDOCRINOPATHIES

▪GYNAECOLOGICAL EXAMINATION

- ADEQUACY OF HYMENAL OPENING
- EVIDENCES OF VAGINAL INFECTION
- CERVICAL TEAR
- CHRONIC INFECTION
- UNDUE ELONGATION OF CERVIX
- UTERINE SIZE,POSITION & MOBILITY
- PRESENCE OF UNILATERAL OR BILATERAL ADNEXAL MASSSES.

OVARIAN FACTORS

Studies performed to determine if there is regular ovulation

- A basal body temperature chart for at least four cycles
- Endometrial biopsy
- Serum progesterone level
- Ovulation index

  The ovulation index involves a urine-stick test that determines if the surge in LH that precedes follicular rupture has occurred.

TUBAL FACTORS

Hysterosalpingography is used to rule out uterine or tubal abnormalities.

Laparoscopy permits direct visualization of the tubes and other pelvic structures and can assist in identifying conditions that may interfere with fertility

CERVICAL FACTORS

The cervical mucus can be examined at ovulation and after intercourse to determine whether proper changes occur that promote sperm penetration and survival.

A postcoital cervical mucus test (Sims-Huhner test) is performed 2 to 8 hours after intercourse.

Cervical mucus is aspirated with a medicine dropper–like instrument. Aspirated material is placed on a slide and examined under the microscope for the presence and viability of sperm cells.

The woman is instructed not to bathe or douche between coitus and the examination.

UTERINE FACTORS

Fibroids, polyps, and congenital malformations are possible conditions in this category.

Their presence may be determined by pelvic examination, hysteroscopy, saline sonogram (a variation of a sonogram), and hysterosalpingography.

SEMEN FACTORS

After 2 to 3 days of sexual abstinence, a specimen of ejaculate is collected in a clean container, kept warm, and examined within 1 hour for the number of sperm (density), percentage of moving forms, quality of forward movement (forward progression), and morphology (shape and form).

From 2 to 6 mL of watery alkaline semen is normal; a normal count is 60 million to 100 million sperm/mL.

- Men may also be affected by varicoceles, varicose veins around the testicle, which decrease semen quality by increasing testicular temperature.
- Retrograde ejaculation or ejaculation into the bladder is assessed by urinalysis after ejaculation.
- Blood tests for male partners may include measuring testosterone; FSH and LH (both of which are involved in maintaining testicular function); and prolactin levels and antisperm antibodies (treated with corticosteroids).

PHARMACOLOGIC THERAPY

Clomiphene citrate (Clomid)

It is the most com mon medication used. Although Clomid's precise action is unknown, it enhances the release of pituitary gonadotropins, resulting in follicular rupture or ovulation.It is usually taken for 5 days beginning on the fifth day of the menstrual cycle. Ovulation should occur 4 to 8 days after the last dose. Patients receive instructions about timing of intercourse to facilitate fertilization.

Gonadotropin-Releasing Hormone (Gnrh)

Another mode of pharmacotherapy for anovulatory women includes the use of pulsatile gonadotropin-releasing hormone (GnRH). Administration of GnRH can result in ovulation in some women with low hormone levels.

Human menopausal gonadotropin

It may also be used as it stimulates the ovaries to produce eggs. Blood tests and ultrasounds are used to monitor ovulation. Multiple pregnancies may occur with these medications. Ovarian hyperstimulation syndrome (OHSS) may also occur.

Menotropin (Pergonal)

Menotropin, a combination of FSH and LH, is used for women with deficiencies in these hormones. Pergonal stimulates the ovaries, so monitoring by ultrasound and hormone levels is essential because overstimulation may occur.

Urofollitropin (Metrodin)

Urofollitropin, containing FSH with a small amount of LH, is used in some disorders (eg, polycystic ovarian syndrome) to stimulate follicle growth. Clomid is then used to stimulate ovulation.

Chorionic Gonadotropin

Chorionic gonadotropin is used to stimulate release of the egg from the ovary and may be used in combination with the above medications.

ARTIFICIAL INSEMINATION

Depositing semen into the female genital tract by artificial means is called artificial insemination .

The woman may have received clomiphene (Clomid) and menotropins (Pergonal) to stimulate ovulation before insemination.

Indications for using artificial insemination include:

(1) the man's inability to deposit semen in the vagina, which may be due to premature ejaculation, pronounced hypospadias (a displaced male urethra), or dyspareunia (painful intercourse experienced by the woman).

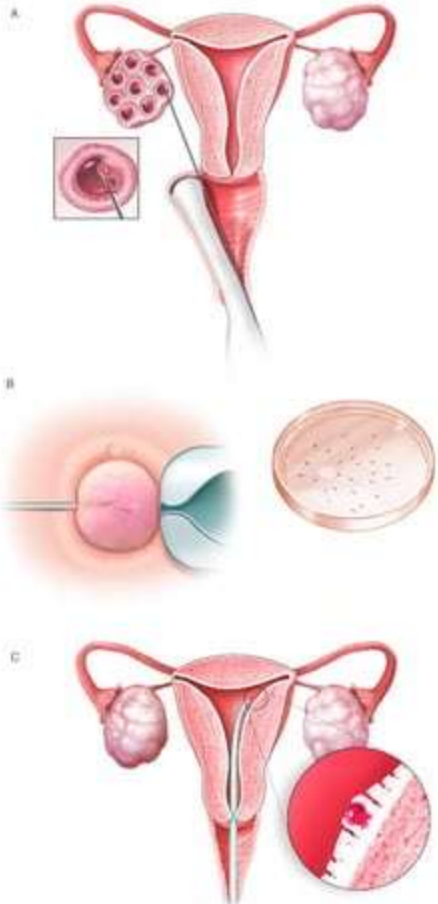
(2) inability of semen to be transported from the vagina to the uterine cavity (this is usually due to faulty chemical conditions and may occur with an abnormal cervical discharge).

(3) a single woman's desire to have a child.

IN VITRO FERTILIZATION (IVF)

During IVF, mature eggs are collected (retrieved) from ovaries and fertilized by sperm in a lab.

Then the fertilized egg (embryo) or eggs (embryos) are transferred to a uterus. One full cycle of IVF takes about three weeks.

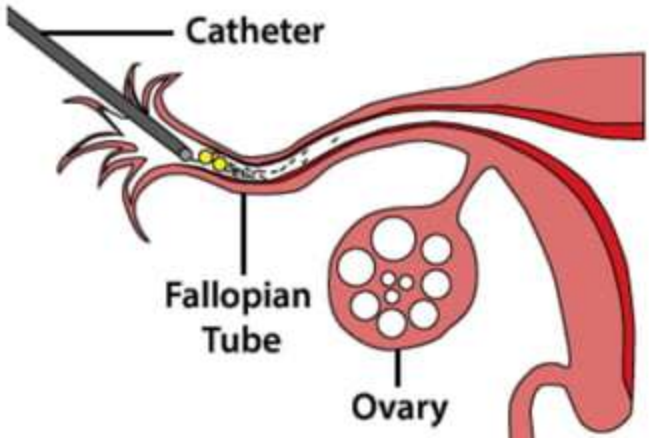


Gamete intrafallopian transfer (GIFT)

It uses multiple eggs collected from the ovaries.

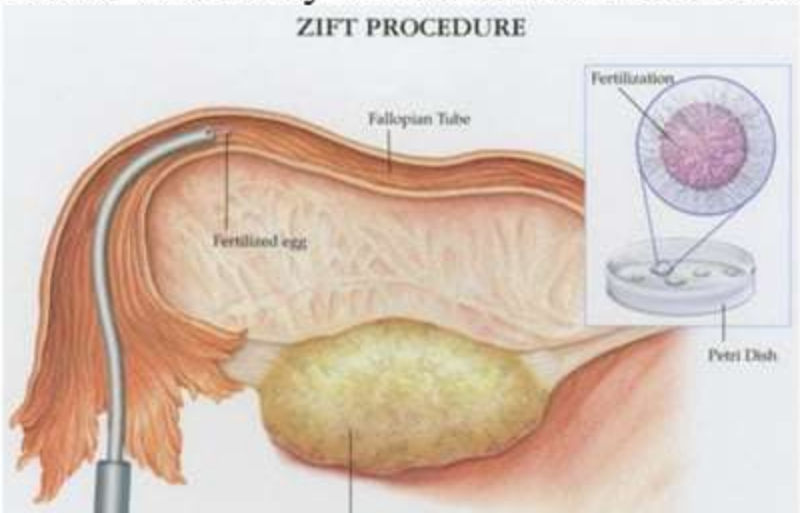
The eggs are placed into a thin flexible tube (catheter) along with the sperm to be used.

The gametes (both eggs and sperm) are then injected into the fallopian tubes using a surgical procedure called laparoscopy.



Zygote intrafallopian transfer (ZIFT)

- It combines in vitro fertilization (IVF) and GIFT.
- Eggs are stimulated and collected using IVF methods. Then the eggs are mixed with sperm in the lab.
- Fertilized eggs (zygotes) are then laparoscopically returned to the fallopian tubes where they will be carried into the uterus.



THANKYOU.....