

CHAPTER
3rd.

FERTILITY AND INFERTILITY

27/02/21

FERTILITY: It is the ability to conceive and bear children, the ability to become pregnant through normal sexual activity.

INFERTILITY: It is defined as a failure to conceive within one or more years of regular unprotected intercourse.

Primary infertility: denotes couples who have never been able to conceive.

Secondary infertility: indicates difficulty conceiving after already having conceived (either conceived or carried the pregnancy to term or had a miscarriage).

CAUSES OF Infertility

Male factors that cause infertility.

1. **Defective Spermatogenesis:** Spermatogenesis & sperm maturation need a high Androgenic environment. Spermatogenesis is predominantly controlled by the genes on the 'Y' chromosome. The process of sperms takes approximately 74 days for completion.

Causes of defective spermatogenesis:

- a) **Congenital:** undescended testis are a

congenital condition in e spermatogenesis is depressed.

- b) Hypospadias: Causes failure to deposit sperm high in the vagina.
- c) Thermal factor: The scrotal temp. has to be $1^{\circ}\text{F} - 2^{\circ}\text{F}$ less than the body temp. It is raised in condition such as varicocele, filariasis.
- d) Infection: In chronic sys. illnesses like bronchiectasis, the quality of sperm is adversely affected.
- e) Endocrine factors: FSH level is seen raised in idiopathic testicular failure.
- f) Immunological factor: Antibodies against spermatozoa surface antigens may cause infertility. This causes clumping of spermatozoa after ejaculation.

2. Obstruction of the efferent ducts: The u.d may be obstructed by gonococcal or tubercular infections. Surgical trauma during vasectomy may lead to obstruction

3. Failure to deposit sperm in the vaginal canal (problems):

- a) Erectile dysfunction
- b) Ejaculatory defects such as premature

1) absence of ejaculation
Hypospadias.

cause of female infertility

30/07/21

II. Ovarian factors

a) Anovulation or oligo-ovulation: ovarian activity depends on gonadotropins, which are related to the release of GnRH from hypothalamus. Disturbance of these may result in anovulation or even amenorrhoea.

b) Tubal & peritoneal factors: are responsible for about 30-40% of cases of female infertility. These include:

- Peritubal adhesions
- Endosalpingeal damage
- Peritoneal endometriosis.
- Tubal spasm

Uterine factors

It includes interference & reception & nidation of fertilized ovum.

Common conditions:

- Uterine hyperplasia
- Endometriosis
- Fibroids
- Congenital malformation.

Cervical factors

Ineffective sperm penetration due to following factors:

- Chronic cervicitis
- Scanty vaginal mucus
- Presence of antisperm antibodies.

- Vaginal factors
- Atresia (partial or complete)
 - Septum
 - Narrow introitus

- Combined factors
- Age of wife beyond 35 yrs & advancing age in men.
 - Infrequent intercourse (less than 4-5 per week) during fertile period (around ovulation)
 - Anxiety & apprehension.
 - Use of lubricants during intercourse & may be spermicidal.

Diagnostic findings

Ovarian and ovulation factors
Diagnostic studies performed to determine if ovulation is regular & whether the progesterone production is adequate for implantation may include a serum progesterone level and an ovulation index.

- The ovulation index involves a urine dipstick test to determine whether the surge in LH that precedes follicular rupture has occurred.