SNS COLLEGE OF NURSING
Saravanam Patti (po), Coimbatore.

DEPARTMENT OF NURSING

COURSE NAME : B.Sc. (Nursing) III Year.

SUBJECT : MEDICAL SURGICAL NURSING II

UNIT : IV-FEMALE REPRODUCTIVE SYSTEM DISORDERS AND ITS MANAGEMENT

TOPIC : INFERTILITY

INFERTILITY

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:-

1. **PRIMARY INFERTILITY**

It Denotes Those Patient Who Have Never Conceived.

2. **SECONDARY INFERTILITY**

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

CAUSES 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)(low progestrone inhibit uterine lining, required for the egg implantation)
- Luteinised Unruptured Follicle(LUP)(increased progesterone secretion,uterine lining develops its normal characteristic changes follow ovulation,but no oocyte released and conception cant occur)

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 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,(vagina colosed or absent)

Transverse Vaginal

Septum Separate Vagina Causing

Dyspareunia & Vaginitis

DIAGNOSTIC EVALUATION

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

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

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

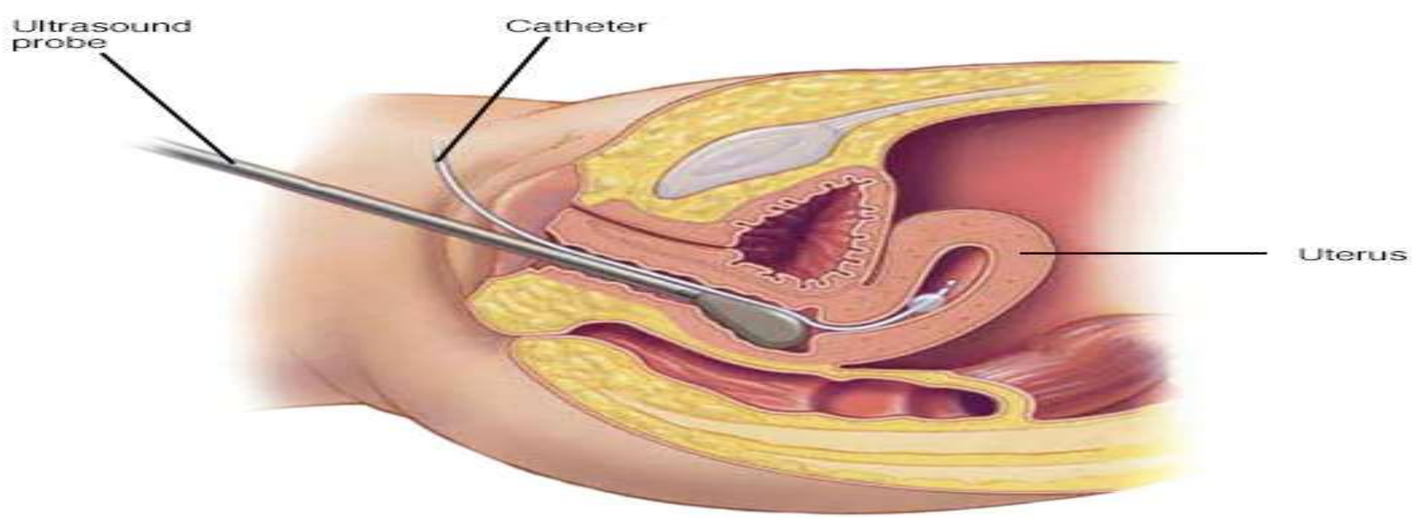
Cervical mucus is aspirated with a medicine dropper–like instrument. Aspirated material is placed on a slide and examined under the microscope for the presence and viability of sperm cells.

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.



PHARMACOLOGIC THERAPY

Clomiphene citrate (Clomid)

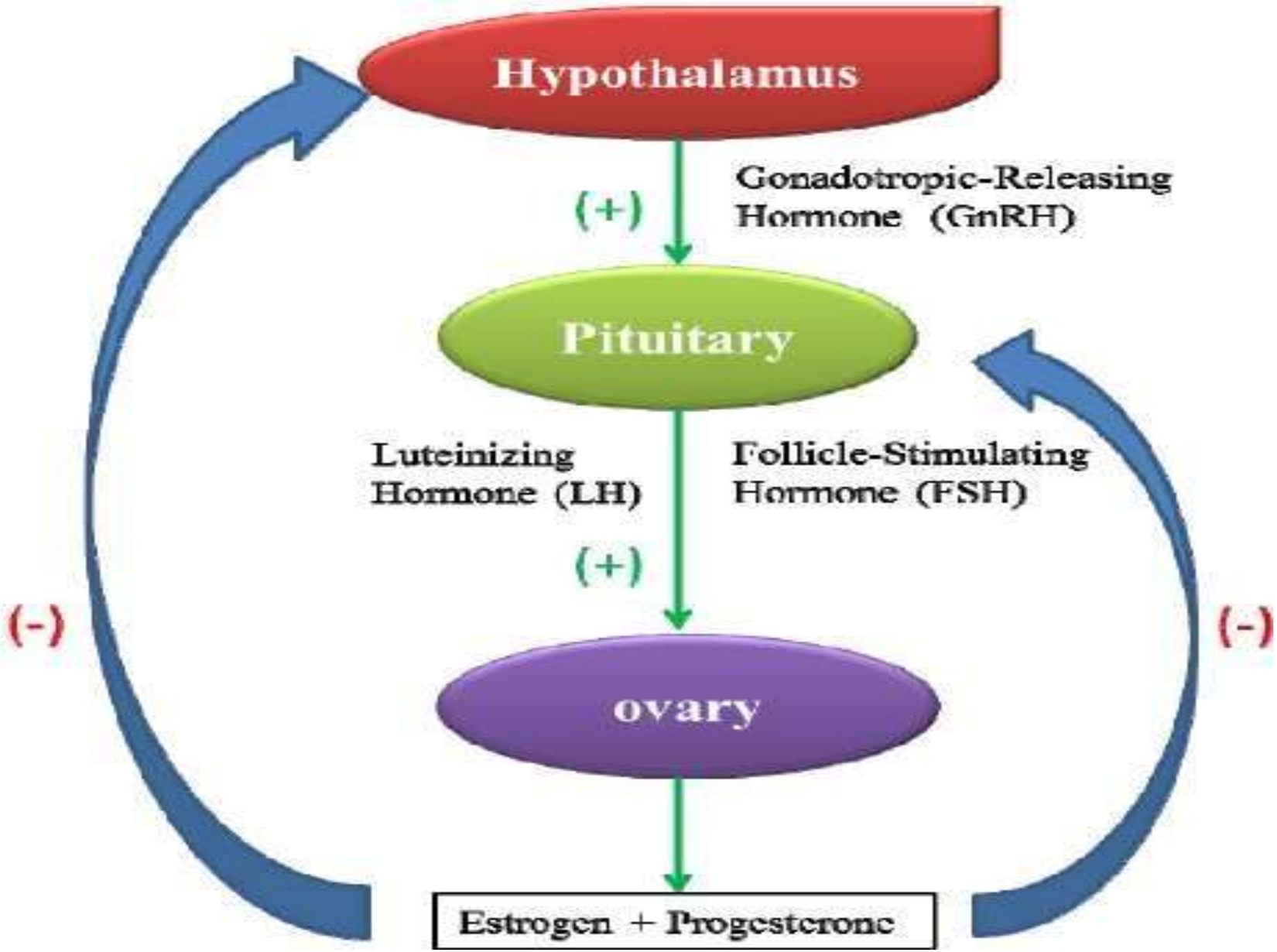
It is the most com mon medication used. Although Clomid's precise action is unknown, it enhances the release of pituitary gonadotropins, resulting in follicular rupture or ovulation.It is usually taken for 5 days beginning on the fifth day of the menstrual cycle. Ovulation should occur 4 to 8 days after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


Hypothalamus
(+)
Gonadotropic-Releasing Hormone (GnRH)
Pituitary
Luteinizing Hormone (LH)
Follicle-Stimulating Hormone (FSH)
(+)
(-)
(-)
ovary
Estrogen + Progesterone

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, or dyspareunia (painful intercourse experienced by

ARTIFICIAL INSEMINATION

the woman

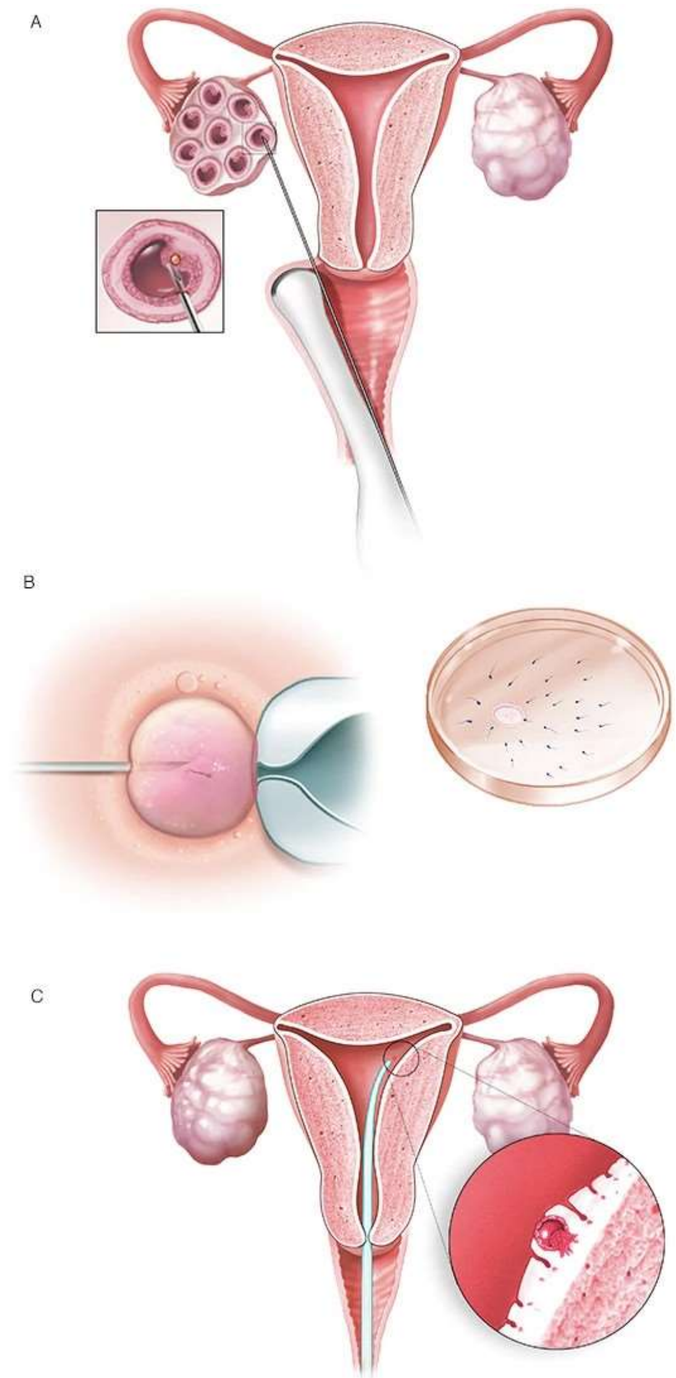
(1) inability of semen to be transported from the vagina to the uterine cavity (this is usually due to faulty chemical conditions and may occur with an abnormal cervical discharge).

(2)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.

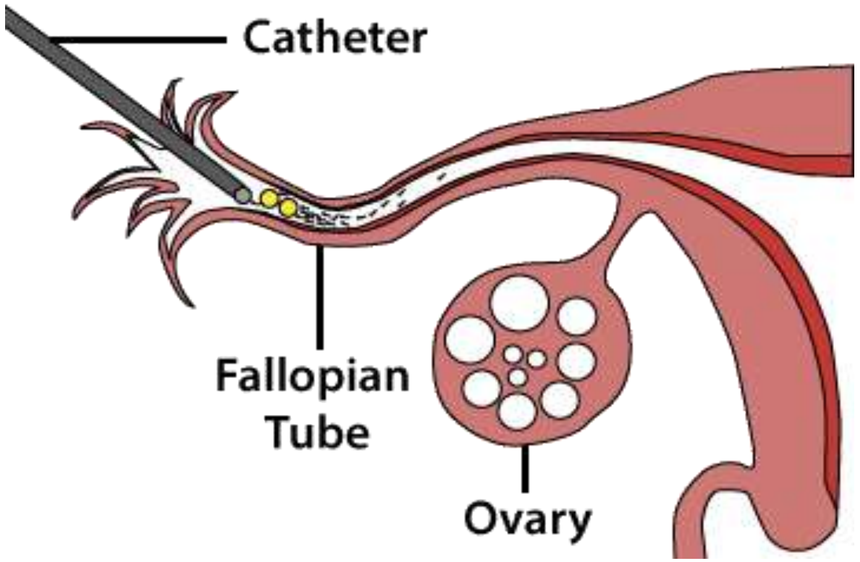


Gamete intrafallopian transfer (GIFT)

It uses multiple eggs collected from the ovaries.

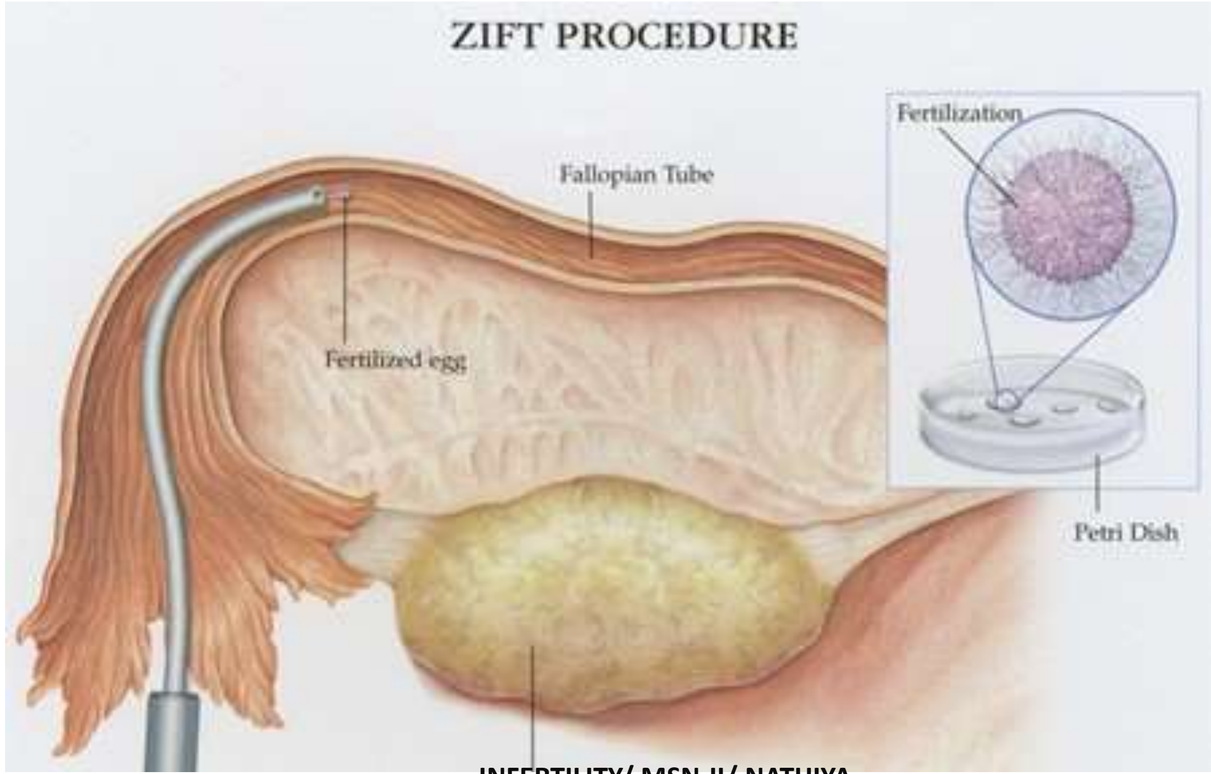
The eggs are placed into a thin flexible tube (catheter) along with the sperm to be used.

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.



ASSESSMENT

1.WHAT DO YOU MEAN BY INFERTILITY?

2.EXPLAIN THE CAUSES OF INFERTILITY?

3.LIST DOWN THE CLINICAL MANIFESTATIONS OF INFERTILITY?

4.EXPLAIN THE PATHOPHYSIOLOGY OF INFERTILITY?

5.EXPLAIN THE MANAGEMNENT OG INFERTILITY?

REFERENCES

- LEWIS(2014), TEXT BOOK OF MEDICAL SURGICALNURSING,2ND EDITION,PAGE NO:1352-1354,ELSEVIER PUBLICATIONS
- BRUNNER (2006),10TH EDITION,TEXT BOOK OF MEDICAL SURGICAL NURSNG,PAGE NO:1502-1504, ELSEVIER PUBLICATIONS

THANKYOU.....