

Biyani's Think Tank
Concept based notes
Gynaecological Nursing
(GNM)

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Gynaecological Nursing

Hrs. 20

Course Content

Unit-I introduction

- Definition related to gynecological nursing
- Sexuality
- Gynecological history taking, examination and investigations

Unit-II Puberty

- Definition development of sex organs in females
- Menstrual cycle
- Disorders of menstruation; amenorrhea, Dysmenorrhoea, Cryptomenorrhoea

Unit III Fertility and Infertility

- Definition, causes both in male and female investigation and Management

Unit IV Pelvic Infections

- Vulva; vulvitis, Bartholinitis
- Vagina: vaginitis, trichomonas vaginalis, Moniliasis
- Metritis, Salpingitis, oophoritis, Pelvic abscess
- Chronic, infections, cervical erosion.

Unit V Uterine Displacement and Descent

- Retroversion, retroflexion
- Descent of the uterus; first degree, second degree, complete procidentia

Unit VI Sexually transmitted disease and their prevention

- Syphilis, gonorrhoea, warts;
- Acquired immunodeficiency syndrome (AIDS)/HIV

Unit VII Breast Disorder

- Mastitis
- Breast abscess
- Tumours
- Malignancy

Unit VIII Benign and malignant neoplasms of Reproductive organs

- Uterine polyps, uterine fibroids

- Cancer: cervix, uterus
- Ovarian cyst: benign, malignant
- Cancer: chemotherapy, radiotherapy
- Palliative care.

Unit-I

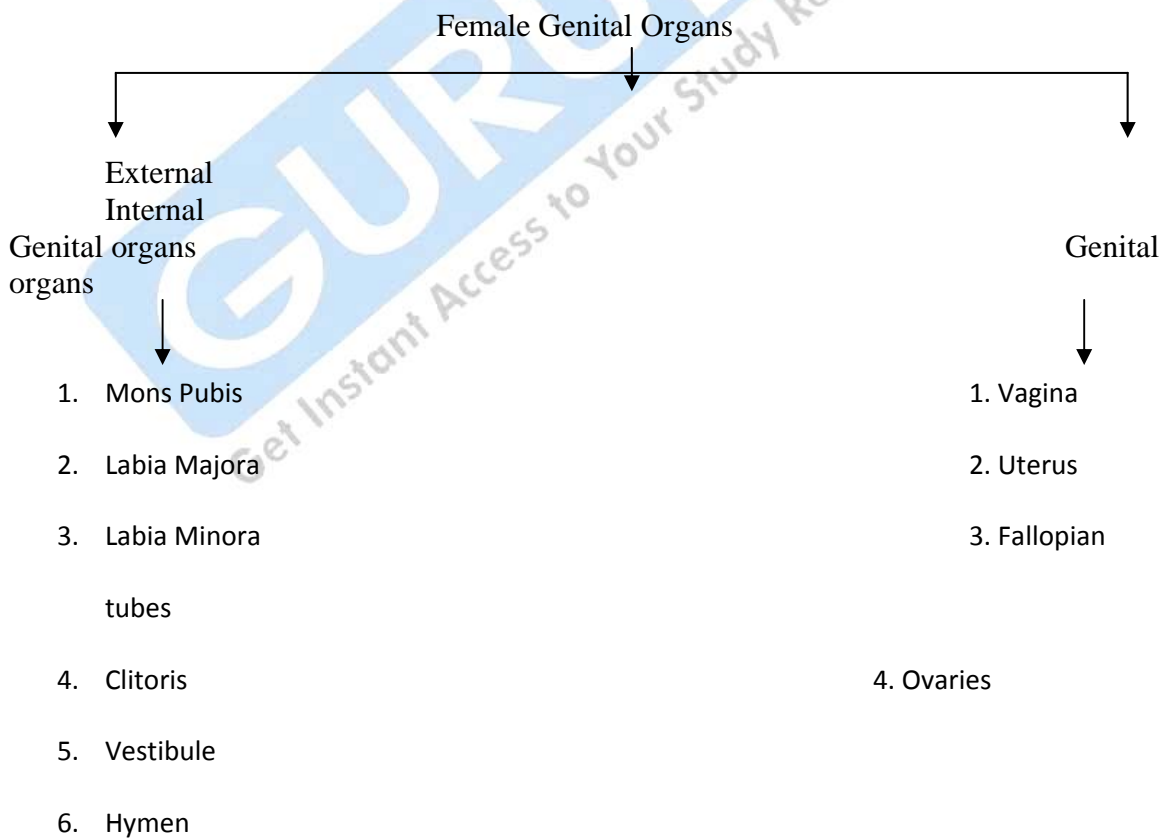
Introduction

Q.1 Define Gynecology?

Ans. Gynecology : a branch of medicine that deals with the disease and hygiene of women:

Q.2 Name the different genital organs in female?

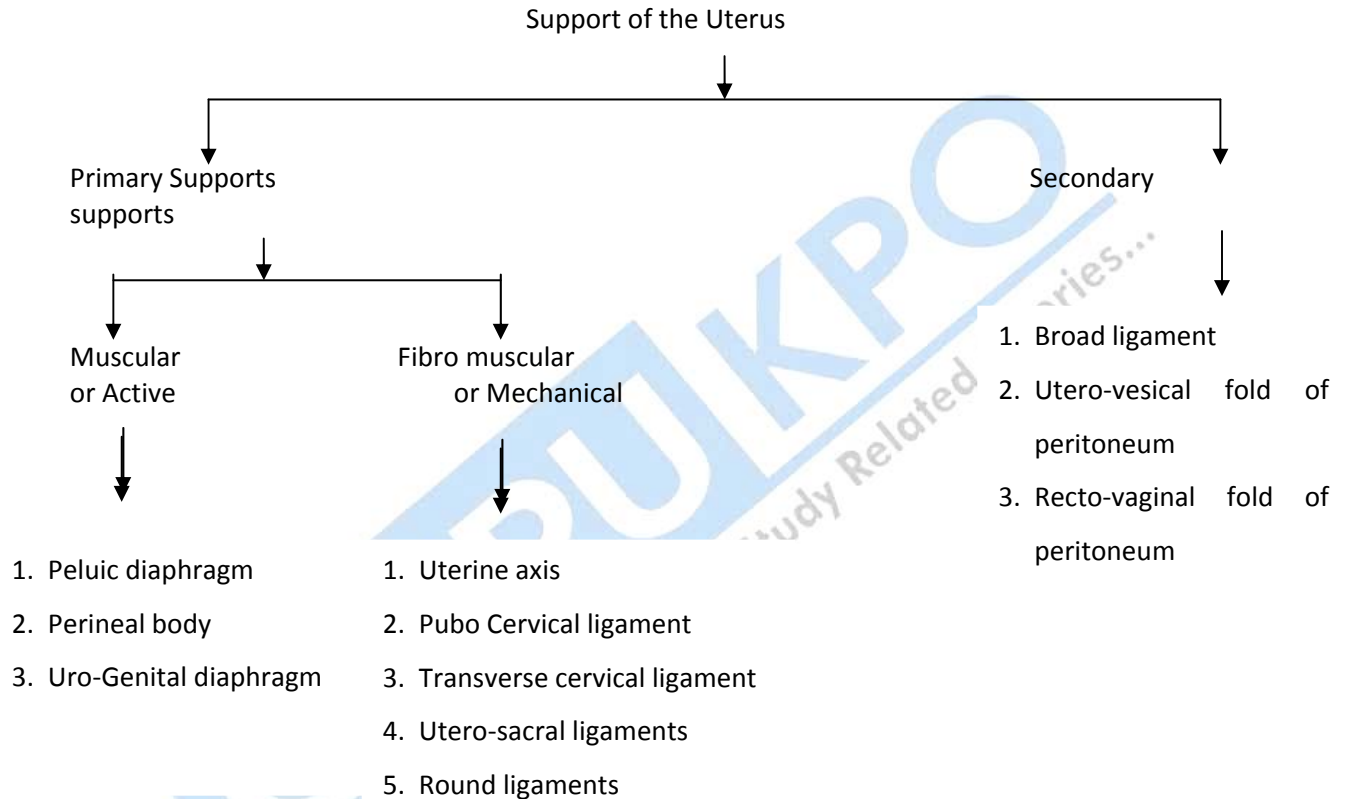
Ans.



7. Perineum and
Bartholin glands,
Vestibular bulbs

Q.3 Mention the support of the uterus?

Ans.



Q.4 How will you proceed to examine a gynecological patient?

Ans.

I. Identification Date:

- Name of patient :
Age :
Marital Status :
Social Status :
Parity :
Residence :
Date :
Chief Complaints :

II. History

1. Menstrual history
2. Obstetric history
3. Past medical history
4. Past Surgical History
5. Family history
6. Personal history

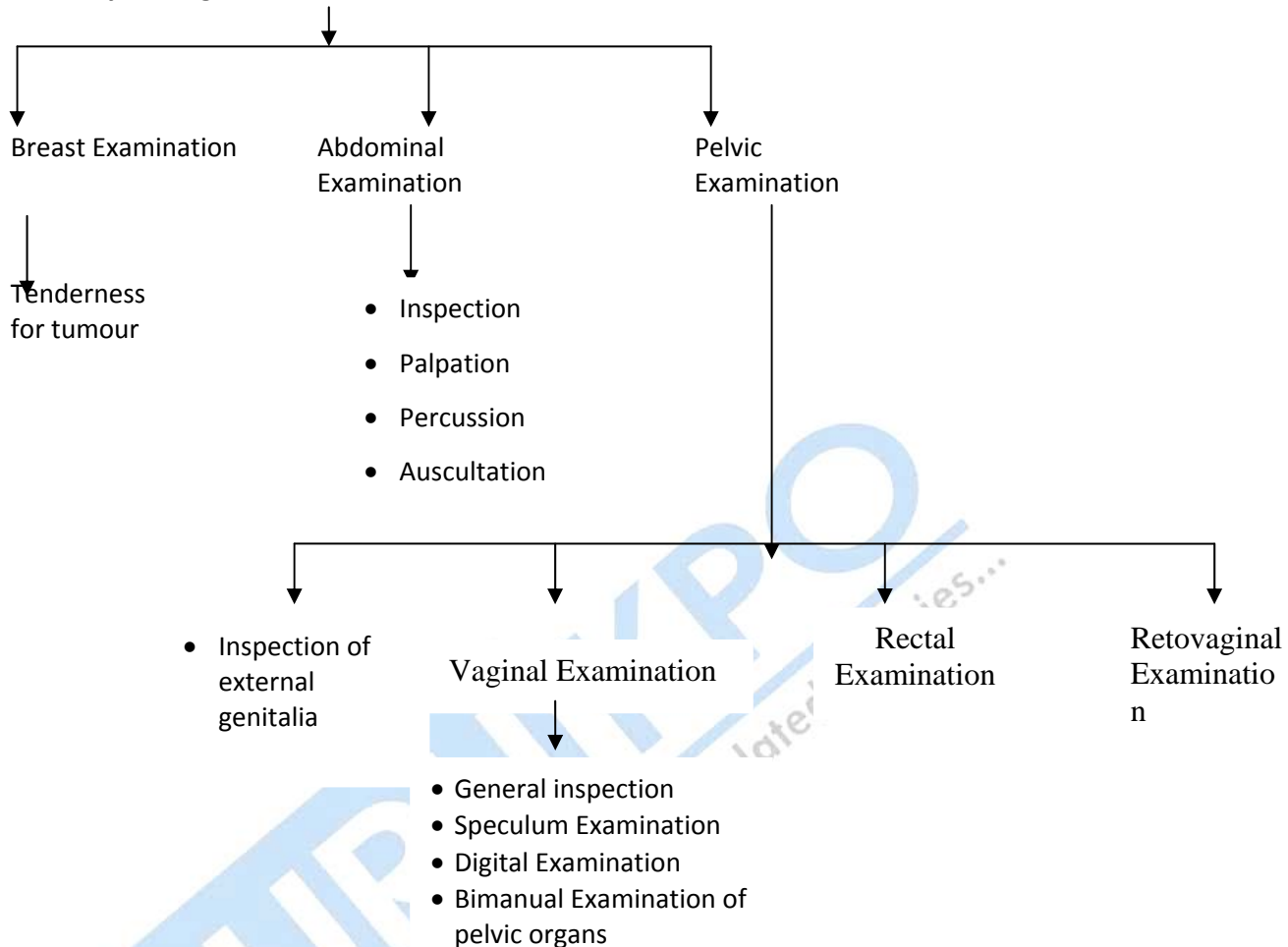
III. Examination : It Includes

1. General & systemic examination
2. Gynecologic Examination

1. General & systemic examination :

- Body Built- thin/obese
- Nutrition- Average/poor
- Stature- Secondary sexual character
- Pallor, Jaundice
- Teeth, gum & tonsils
- Neck – Palpation of thyroid glands
- Oedema of Legs
- Vital signs
- Cardio – Pulmonary & Respiratory system

Gynecologic Examination



Other Examination:

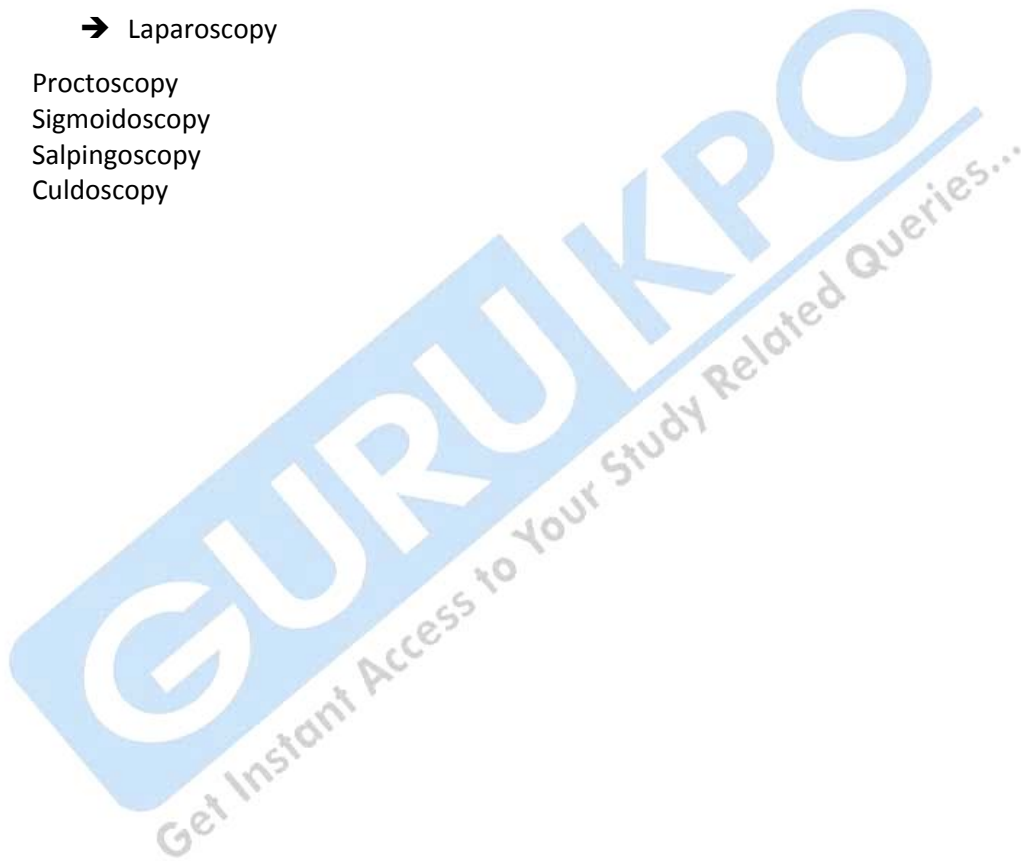
1. Blood
2. Urine
3. Cervical and vaginal exfoliative cytology
4. Cervical Mucous study:
 - (i) Bacterial Examination
 - (ii) Infertility
 - Post coital test (PCT)
 - Sperm penetration Test
 - Sperm cervical mucous contact test (SCMCT)
 - (iii) Hormonal study

5. Imaging Study:

- Ultra Sonography

- Trans abdominal
- Trans Vaginal

- Colposcopy
- X-ray
- CT-Scan
- MRI
- Endoscope
 - Hysteroscopy
 - Laparoscopy
- Proctoscopy
- Sigmoidoscopy
- Salpingoscopy
- Culdoscopy



Unit II

Puberty

Q.1 What is puberty & explain tanner staging and mention the abnormal puberty?

Ans. Definition: Puberty in girls is the period which links childhood to adult. It is the period of gradual development of secondary sexual characters.

Morphological Changes:

➤ As described by "Tanner & Marshall" five important physical changes occur during puberty. These are breast, pubic & axillary hair growth, growth in height & menstruation. Most of the changes occur gradually but only the menarche can be dated.

➤ The most common order is :-

- Beginning of growth spurt : (Start)



- The larche (Breast budding changes)



- Adrenarche (Pubic & Auxiliary hair)



- Peak growth in height



- Menarche (menstruation) (Important controlling factors for onset of puberty are genetic, nutrition, body weight, psychologic state, exposure to light & others.)

➤ **Endocrinology in puberty:**

Tanner Staging

➤ According to Tanner, breast & pubic hair development at puberty are divided into 5 stages.

I. **Breast Development:**

- Stages Ist – Pre pubertal stages elevation of papilla only.
- Stages IInd – Breast budding, palpable breast tissue areola & nipple began to enlarge.
- Stages IIIrd – Further enlargement of entire breast tissue.
- Stage IVth – Secondary mound of areola projecting above the breast tissue.
- Stage Vth – Secondary mound disappear in stage IVth. Adult breast with typical contour.

II. Public hair development:

- Stage Ist – Pre Pubertal stage, no public hair present.
- Stage IIrd – Sparse, long hair on either side of Labia Majora
- Stage IIIrd – Darker, curled hair over the mons pubis.
- Stage IVth – Adult type hair covering a small area over the mons only.
- Stage Vth – Adult hair with a triangle distributor covering the medial sides as the thigh.

Common disorder of the puberty:

1. Precocious puberty : before 10 years age.
2. Delayed puberty: Does not occurs 16 years of the age.
3. Menstrual abnormalities: Amenorrhoea, dysmenorrhoea menorrhagia
4. Others in :
 - PID
 - carcinoma
 - hirsutism

Q.2 What is meant by menarche?

Ans. Menarche:

The first menstruation in life is called menarche. It may occur any where between 10-16 years The peak time being 13 years. There is endometrium proliferation due to

ovarian oestrogen but when the level drops temporarily, the endometrium sheds & bleeding is visible.

Note: The first period is anovular.

- **Growth:** Growth in height in an adolescent girl is mainly due to hormones. The important hormones are growth hormone, oestrogen & insulin-like growth factor:

Genital organ changes:

1. **Ovaries:-** Ovaries change their shape, the elongated shape becomes bulky & oval.
2. The uterine body & cervix ratio at birth is about 1:2, the ratio becomes 1:1 when menarche occurs. Thereafter the enlargement of the body occurs rapidly so that the ratio soon becomes 2:1.
3. The vaginal changes are more pronounced. The vaginal pH becomes acidic ranging between 4 to 5.
4. The vulva is more reactive to steroid hormones.
5. The mons pubis & the labia minora increase in size.
6. The breast changes are pronounced. Under the influence of oestrogen, there is marked proliferation of duct system & the breast becomes prominent & round. Under the influence of progesterone, the development of acini increases considerably.

Q.3 Define menstruation? Explain the changes that occur during each menstrual cycle?

Ans. **Definition:** Menstruation cycle defined as the cyclic events, changes that take place in a rhythmic fashion during the reproductive period of women's life.

or

menstruation cycle is the visible manifestation of cyclic physiological uterine bleeding due to shedding of the endometrium following invisible interplay of hormones mainly through the HPO- axis.

The cyclic discharge of blood, mucous, epithelial and other substances from the uterus during the reproductive life of the females at an average interval of 28 days is called menstruation.

* Changes, during, menstruation, cycle : During each menstruation cycle, series of changes occurs in ovaries & accessory sex organs (uterus, vagina, cervix & ovary).

* These, changes, are :

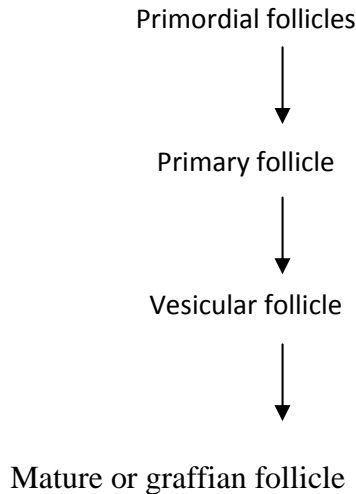
1. Ovarian Changes
2. Uterine Changes

1. Ovarian Changes: The changes in the ovary occur in two phases during each menstrual cycle these are:

- i. Follicular phase : (5-14 days)
- ii. Luteal phase : (15-28 days)

i. Follicular phase : (5-14 days): This extends from the 5th day of the cycle till the time of ovulation which takes place at about 14 day. During this phase, the primordial follicle of the ovary develops into a graafian follicle.

Ovarian follicle: The follicle consists of ovum surrounded by epithelial cells. These follicles gradually grow into mature follicles through various stages:



The graffian follicle is the mature ovarian follicle on the 14 day of menstruation, the graffian follicle is ready to release ovum.

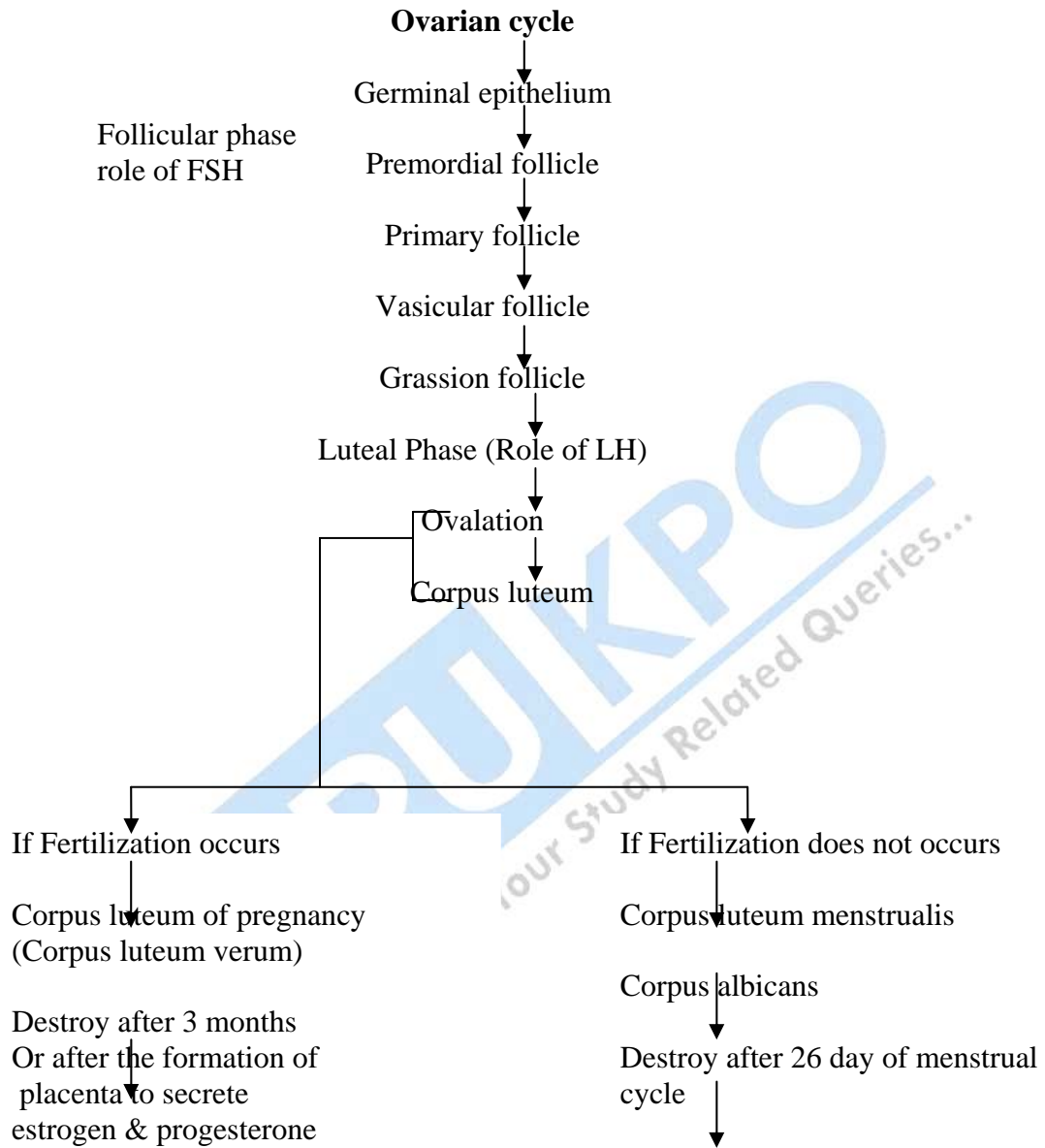
Ovulation: It is the process in which there is rupture of graffian follicle with the discharge of ovum in to the abdominal cavity.

ii) Luteal Phase: (15 to 23 day)

This phase extends from 15 day to 28 day of menstrual cycle. After ovulation the ruptured follicle develop in to a yellow body called corpus luteum.

The corpus lateum act as a secratory endocrine glands & release or secrete large quantity of progesterone & small quantity of oestrogen. The corpus luteum degenerate as corpus luteum menstrualis if fertilization have not occur till 26 to 28 days.

Note :-



Uteri

Duration of the menstrual cycle is 28 days

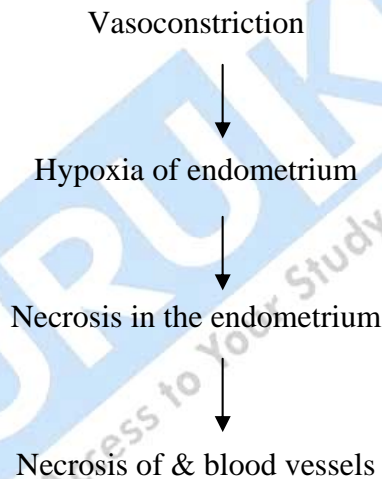
1. Menstrual Phase (0-5 days)
2. Proliferative Phase (6-14 days)
3. Secretary phase (15-28 days)

1. **Menstrual Phase:** This is the phase during which bleeding occurs & its duration last about first 4 to 5 days.

Causes of bleeding:

→ 2 days before the onset of bleeding (26-28 days) there is sudden reduction in the release of progesterone & oestrogen from ovary. This is responsible for menstrual changes in the endometrium due to lack of hormones oestrogen & progesterone. The blood vessels in the endometrium under goes severe constriction because of :

1. Sudden lack of oestrogen & progesterone which are vasodialator.
2. Action vasoconstrictor substances like prostaglandins releases from tissue of endometrium



2. Proliferation phase: (6-14 days)

This phase extends usually from 5th day to 14th day as menstrual cycle.

During proliferation phase, the ovary secrets estrogen that acts on the endometrial cells.

These endometrial cells proliferate rapidly under the influence of estrogen. Thus the epthillum reappear on the surface of endometrium with in first 4 to 7 days of proliferative phase. This proliferation of the cells in the endometrium is continued because of continue secretion of oestrogen till the end of cycle. New blood vessels appear in the

endometrium. At the end of proliferative phase, the thickness of endometrium is 3 to 4 mm.

3. Secretary Phase: (15 to 28 days)

After ovulation, corpus luteum is developed in the ovary. It secretes large quantity of progesterone & small quantity of oestrogen. Oestrogen causes proliferation of cells in the endometrium (Hyperplasia) & progesterone causes further enlargement of the endometrium (hypertrophy).

At the end of secretary phase, the thickness of endometrium is 5 to 6 mm. If a fertilized ovum is implanted during this phase, the menstrual cycle does not appear. If an ovum is not fertilized, menstruation occurs after this phase & a new cycle starts.

Q.5 Write a short note on corpus luteum.

Ans. Definition: A glandular yellow body developed from a graafian follicle after the discharge of an ovum is called as corpus luteum.

Development of corpus luteum:

- During ovulation the graafian follicle ruptures and an ovum is discharged. After the discharge of an ovum, the remaining cells of the graafian follicle together form the corpus luteum. The follicles filled with blood immediately now it is called as corpus hemorrhagicum.

Functions of corpus luteum:

1. The corpus luteum acts as a temporary endocrine gland secreting large quantities of progesterone & small quantities of oestrogen.

2. The hormone secreted by corpus luteum are very much essential for the maintenance of pregnancy if fertilization has occurred.
3. Corpus luteum is active till placenta start secreting oestrogen & progesterone.
4. It occurs after 3rd month of pregnancy (degeneration)
5. Abortion occurs if corpus luteum becomes inactive before the onset of hormonal secretion from placenta.

Fate of corpus luteum:

1. **If ovum is not fertilized:** The corpus luteum reaches the maximum development about 1 week after ovulation during this period. It secretes large quantity of oestrogen then it degenerates into corpus luteum menstruale.

Afterwards the corpus luteum menstruale is transformed into a white scar called corpus albicans.

2. **If ovum is fertilized:** If ovum is fertilized or pregnancy occurs, the corpus luteum decreases in size & is transformed into corpus luteum graviditatis. This persists for 3 to 4th month. During this period, it secretes large amount of progesterone & a small amount of oestrogen which are essential for maintaining the pregnancy.

Q.6 Mention the role of different hormones.

Ans. Hormonal regulation of menstrual cycle:

I. Hormonal regulation of ovarian changes

(A) Follicular changes: FSH is responsible for follicular growth.

(B) Ovulation: LH is important for ovulation.

(C) Luteal phase: LH & FSH both are essential for luteal phase because they stimulate corpus luteum to secrete progesterone & estrogen.

II. Hormonal regulation of uterine changes:

- (a) Proliferative phase: Oestrogen is essential
- (b) Secretory phase Progesterone is responsible
- (c) Menstrual phase: Oestrogen & progesterone level should be low for menstrual phase.

Q.7 Define menopause? What are changes takes place in body at menopause?

State it's clinical features?

Ans. **Definition:** It is defined as permanent cessation of menstrual cycle at the as reproductive life due to loss of ovarian follicular activity.

Organ changes at menopause

1. **Ovary:** Ovary shrink in size become wrinkled & white colour.
2. **Fallopian tube:** Fallopian tube showed features of atrophy.
3. **Uterus:-** Uterus become smaller & the ratio between the body & cervix reverts to the 1:1.
4. **Vagina:** the vagina become narrower due to gradual loss of elasticity & PH become alkaline.
5. **Vulva:** Vulva shows feature atrophy.
6. **Breast:** Breast fat is re-absorb & nipple decrease in size.
7. **Bladder & Urethra:** Under go similar changes to those of the vagina "There may be dysurea increase frequency, urgency or stress in continence.
8. **Loss of muscle tone:** Lead to pelvic relaxation.
9. **Bone metabolism:** Following menopause there is loss of bone mass about 3 to 5% per year. This is due to deficiency of estrogen post menopausal women runs a high risk for fracture of bone due to osteoporosis.

10. **Cardio Vascular system:** Risk of cardio vascular disease is high in post menopause women due to deficiency of oestrogen.

Menopausal Symptoms:

1. Vasomotor
2. Genital & urinary
3. Psychological
4. Health Hazards

In majority, a parts from cessation of menst no more symptoms is evident is some symptoms appear which may be grouped as follow.

1. Vasomotor:

- Hot flush :
 - Lasts for 1-2 minutes.
 - Unbearable
 - Associated with night sweating
- Disturbed sleep
- Peripheral Vasodilator
- Palpitation
- Pulse rate : rise by 20 beats/minutes

2. Genital & urinary:

➔ Genital symptoms:

- Dysparecimia
- Atrophic virginities

➔ Urinary symptoms:

- Urgency urgency

- Dysuria

3. **Psychological:** There is decrease frequency anxiety:

- Headache,
- Insomnia,
- Irritability
- Depression.

4. **Health Hazards:**

Osteoporosis & Fracture:

Cardio vascular & cerero vascular: Increase risk as IHD, CAD, & CVA.

Dry skin & prone to damage & infection.

Q.8 Short note on hormonal replacement therapy?

Ans. **Hormonal Replacement Therapy:-**

Objective of HRT:

- ➔ The objective of HRT is to ensure the potential benefits & minimize the risk.
- ➔ HRT is clearly beneficial in symptomatic women unless there is contra indications to therapy.
- ➔ HRT is also indicated even in symptoms free cases to prevent osteoporosis, atherosclerosis cardio vascular, disease and degenerating changes in the skin.

Indication:

1. Premature ovarian failure
2. Surgical or radiation menopause
3. Symptomatic women.

Contra Indication:

1. An diagnosed genital tract bleeding

2. Oestrogen dependant in breast cancer & endometrial cancer.
3. Active liver disease
4. Gall bladder disease

Monitoring prior to during HRT:

1. Blood pressure
2. Breast examination
3. Pelvic examination
4. Cervical cytology
5. Pelvic USG
6. Mammography
7. Serum level of oestradiol

Drugs used in HRT:

- The principle hormone used in HRT is oestrogen. This is ideal for a women who had hysterectomy already but a women with in intact uterus only oestrogen therapy lead to endometrial hyperplasia & even endometrial carcinoma.
 - Commonly used oestrogen are conjugated oestrogen.
 - Progesterone used are medroxy progesterone acetate
- 1) Oral oestrogen therapy:** Oestrogen conjugated equil oestrogen 0.625 – 1.25 mg is given daily for women who had hysterectomy.
 - 2) Oestrogen & cyclic progestin:** (Combined therapy) for a women with intact uterus oestrogen is given continuously for 25 days & progestin is added for last 12-14 days.
 - 3) Sub dermal & implants:** Implants are inserted sub cutaneously (SC) over the anterior abdominal wall using local anesthesia 17- β oestradiol implants, 25 mg, 50 mg or 100 mg are available 8 can be kept for 6 months.

4) Percutaneous Oestrogen gel: 1 gm application of gel delivering 1 mg of oestradiol daily is to be applied on the skin over the anterior abdominal wall or thigh.

5) Vaginal cream: Conjugated vaginal oestrogen cream 1.25 mg daily is very effective specially when associated with atrophic vaginitis

6) Progestin: Patient with history of breast carcinoma or endometrial carcinoma progestin may be used. It may be effective in suppressing hot flushes and it prevents oestoporosis.

Q.9 What is meant by menstrual abnormalities?

Ans. **Menstrual abnormalities:** It means menstrual disorder.

There are of following types:

1. Pre menstrual syndrome (PMS)
2. Dysmenorrhoea
3. Menorrhagia (Hypermenorrhoea)
4. Epimenorrhoea/Polymenorrhoea
5. Metrorrhagia
6. Oligomenorrhoea
7. Hypomenorrhoea
8. Dysfunctional uterine bleeding (DUB)
9. Amenorrhoea
10. Mid-menstrual pain

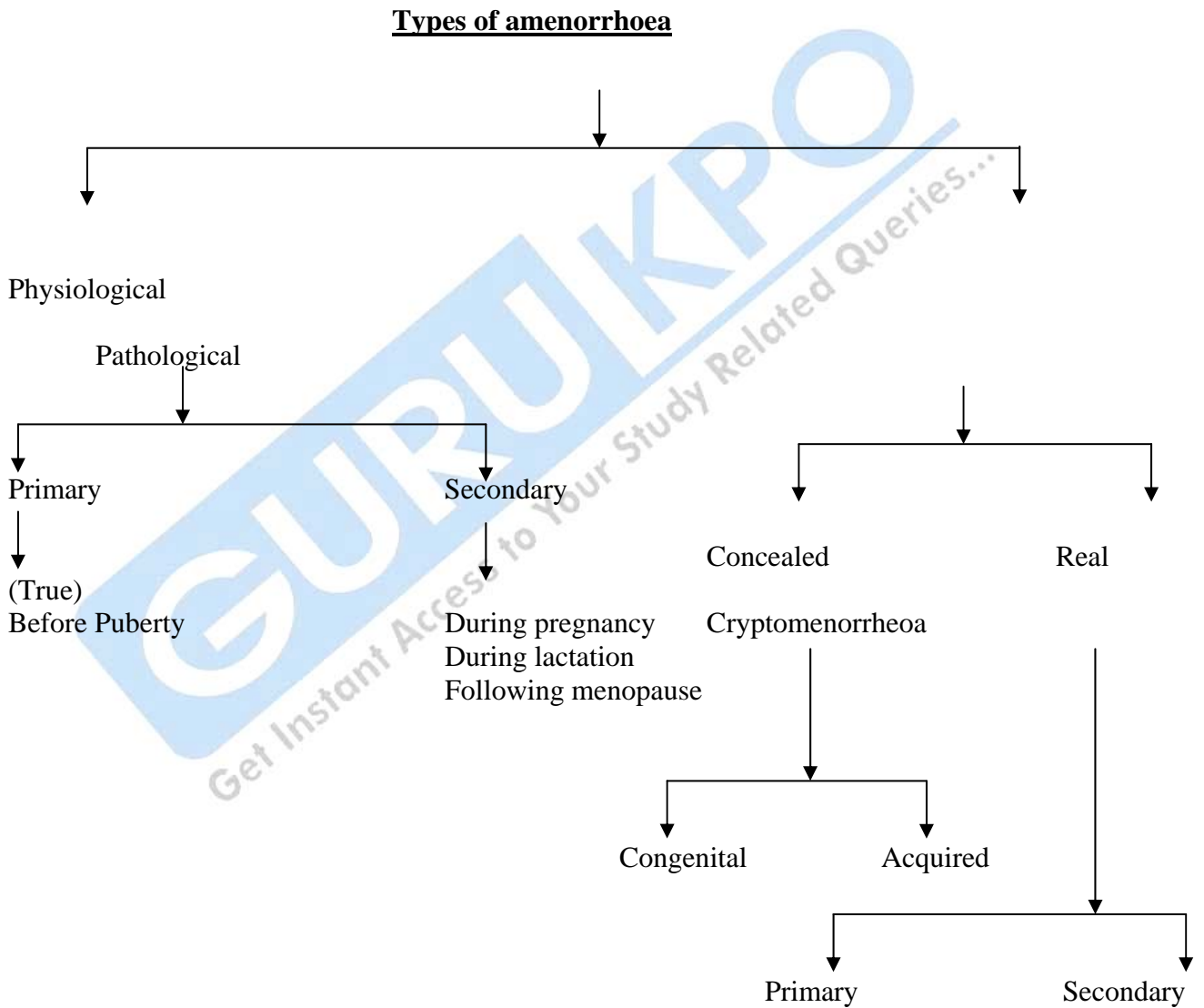
Q.10 Define amenorrhoea write the types of amenorrhoea & explain about cryptomenorrhoea?

Ans. **Definition:** Amenorrhoea means absence of menstruation, it is a symptom not a disease

Types of amenorrhoea:

1. Physiological amenorrhoea
2. Pathological Amenorrhoea

Physiological amenorrhoea



Cryptomenorrhoea

Definition: In cryptomenorrhoea there is periodic shedding of the endometrium & bleeding but the menstrual blood fails to come out from the genital tract due to obstruction in the passage.

Cause:

1. Congenital
2. Acquired

1. Congenital:

- i. Imperforated hymen
- ii. Transverse vaginal septum
- iii. Atresia of the upper third of vagina & cervix

2. Acquired:

- i. Stenosis of the cervix following amputation, deep cauterization and conization.
- ii. Secondary vaginal atresia following difficult vaginal delivery.

Clinical Features:

1. Amenorrhoea dated back from the events.
2. Periodic pain in lower abdomen.
3. Urinary symptoms: Retention of urine
4. Pelvic examination reveals the offending lesion either in vagina or cervix. The uterus is symmetrically enlarge.

Treatment

1. Simple dilatation of cervix so as to drain the collected blood is enough.
2. In case of secondary atresia of vagina, reconstruction surgery is to be perform to maintain the patency.
3. Dilatation of the cervix in cervical stenosis
4. A incision is required in the human to drain the blood in the case of imperforate hymen.

Q.10 Write a short note on dysmenorrhoea?

Ans. **Dysmenorrhoea:**

Definition: Dysmenorrhoea means painful menstruation

or

Dysmenorrhoea is defined as pain ful menstruation of sufficient magnitude so as to incapacitate day to day activity.

Types of dysmenorrhoea:

1. Primary Dysmenorrhoea
2. Secondary Dysmenorrhoea

1. Primary/spasmodic/Intrinsic/functional/essential/idiopathic/dysmenorrhoea:

The primary dysmenorrhoea is one where there is no identifiable pelvic pathology. It signifies pain due to menstruation of uterine origin.

Causes:

1. **Psychosomatic factor:** Due to anxiety tension.
2. Abnormal anatomical & functional aspect of uterus.
3. Endocrine factor: Decrease vasopression
4. Biochemical factor
5. Elevated level of uterine prostaglandins.
6. Neurogenic factor.

Clinical Features:

The primary dysmenorrhoea usually appease within 2 years of menarche. Patient is young (18-24 years)

1. The pain begins a few houses before or just with onset of menstruation The pain is spasmodic & confined to lower abdomen & may radiate to back & medial aspect of thighs.
2. **Systemic discomfort:**
 - Nausea
 - Vomiting
 - Faitigue
 - diarrhoea
 - Headache
 - Sometimes fainting

2. Secondary Dymmenorrhoea: Secondary dysmenorrhoea is normaly considered to be menstruation associated pain occurring in the presence of pelvic pathology.

Causes:

1. Chronic pelvic infection
2. Pelvic endometriosis

3. Endometrial polyp
4. IUCD in utero
5. Uterine fibroid
6. Cervical stenosis

Clinical features:

The pain is dull, situated in the back & in front without any radiation.
The onset duration of pain depends on the pathology producing pain.

Treatment:

1. Treatment of secondary dysmenorrhoea is directed towards the under line cause such as endometriosis or PID.
2. Antiprostaglandins such as mefenamic acid may produce some relief.

Q.12 What do you understand by menorrhagia and metrorrhagia?

Ans. Menorrhagia:

Definition: Menorrhagia is defined as cyclic bleeding at normal intervals, the bleeding is either excessive in amount (more than 80 ml) or duration or both.

I. Organic:

1. Pelvic pathology :
2. Systemic : Liver dysfunction, congestive heart failure severe hypertension.
3. Endocrinal
4. Emotional upset
5. Blood Dyscrasias

II. Functional Causes: due to disturb HPO axis.

Metrorrhagia:

Definition: Metrorrhagia is defined as irregular acyclic bleeding from the uterus in

- In clinical practice the bleeding from any part of the genital tract is included under the metrorrhagia
- Irregular bleedings in the form or contact bleeding of inter menstrual bleeding in a normal cycle is also included in the metrorrhagia.

Q.13 Write a short note on dysfunctional uterine bleeding (DUB)?

Ans. Dysfunctional uterine bleeding:-

Definition: DUB is defined as a state of a abnormal uterine bleeding without any clinically detectable organic pelvic pathology.

Causes: The current concept enclosed that the abnormal bleeding is most likely due to

- (i) local causes in the endo-metrium.
- (ii) Alteration in the ratio of endometrial prostaglandins.
- (iii) The endometrial abnormalities
- (iv) Emotional influences worries anxieties.

Classification:

1. Ovular bleeding
2. Anovular bleeding

1. Ovular bleedings:

- i. Epimenorrhoea
- ii. Oligo Menorrhoea
- iii. Functional menorrhagia

2. **Anovular bleeding:**

- Metropathia Haemorrhagica
- Threshold bleeding

Investigation:

1. History
2. Physical and systemic examination
3. Internal examination
4. A blood values
5. Hysteroscopy
6. Lapros copy

Management of DUB

General Management:

1. Rest is imposed during bleeding phase
2. Anemia should be treated
3. Clinically avoidance systemic or endocrinal abormalties should be investigated & treated.

Medical Management

1. Hormonal therapy
2. Oestrogen
3. Combined oestrogen & progesterone therapy
4. Prostaglandin synthetase inhibitor
5. Anti fibrinolytic agents.

Surgical mgt:

1. Uterine curettage
2. Endometrium resection
3. Hysterectomy

Nursing Management:

1. Assurance and psychological support
2. Fluid therapy depending upon blood loss
3. Intake & output chart therapy
4. Drug therapy: hormonal therapy
5. Maintain personal hygiene
6. Check vital signs
7. Helps the patient in daily activity of living

Q.13 What is means by oligomenorrhoea?

Ans. Oligomenorrhoea:

Definition: Menstrual bleeding occurring more than 35 days apart and which remains constant at that frequently is called oligomenorrhoea or infrequent menses at interval longer than 35 days.

Causes:

1. Age related: During adolescence & during menopause
2. Weight related: obesity
3. Stress and exercise related
4. Endocrine disorder commonest cause
5. PCOD (Polycystic ovarian disease)
6. Hyperthyroidism
7. Hyperprolactinaemia
8. Androgen producing tumour

Treatment:

→ Treatment depends upon the causative factor such as:-

1. Hormonal therapy for PCOD or other endocrinal disorder.
2. Antitubercular therapy for tubercular endometritis.
3. Surgery for ovarian or adrenal tumour.

Q.14 Mention the role of different hormones controlling the menstrual cycle?

Ans. Hormonal regulation of menstrual cycle:

I. Hormonal regulation of ovarian changes

(A) Follicular changes: FSH is responsible for follicular growth.

(B) Ovulation: LH is important for ovulation.

(C) Luteal phase: LH & FSH both are essential for luteal phase because they stimulate corpus luteum to secrete progesterone & estrogen.

II. Hormonal regulation of uterine changes:

(d) Proliferative phase: Oestrogen is essential

(e) Secretory phase Progesterone is responsible

(f) Menstrual phase: Oestrogen & progesterone level should be low for menstrual phase.

Unit III

Infertility

Q.1 What is sterility or infertility?

Ans. Infertility:

Definition: Is defined as a failure to conceive within one or more years of regular unprotected coitus.

Primary infertility denotes women who have never conceived

Secondary infertility indicates previous pregnancy but failure to conceive subsequently.

Factor responsible for fertility are:

1. Healthy spermatozoa should be deposited high in the vagina.
2. The spermatozoa should undergo changes and acquire motility.
3. The motile spermatozoa should ascend through the cervix into the uterine cavity and fallopian tubes.
4. There should be ovulation
5. The fallopian tube should be patent.
6. The spermatozoa should fertilize the oocyte at the ampulla of the tube.
7. The zygote should reach the uterine cavity after 3 to 4 days of fertilization
8. The endometrium should be prepared for the implantation and corpus luteum should function adequately.

Q.2 What are the causes of female infertility?

Ans. Causes of female infertility:

1. Ovarian factor (15 to 25%)
 2. Tubal peritoneal factor (25 to 35%)
 3. Cervical & uterine factor
 4. Vaginal factor
-
1. The ovarian factor includes:
 1. Anovulation
 2. Luteal phase defect

3. Luteinised unruptured follicle

1. **Anovulation:**

The possible causes of Anovulation:

(A) HPO- Axis Disturbance

Hypothalamus :

- Obesity or weight loss
- Psychological disturbances
- Psychotropic drug
- Sedative oral pills

Pituitary Pituitary:

- Sheehan's disease
- Tumour – Prolactinaemia

Ovary :

- Polycystic ovarian syndrome
- Premature ovarian failure

(B) Thyroid dysfunction : Hypo/ hyper thyroidism

(C) Adrenal:

- Hyperplasia
- Tumour
- Hyperandrogenism

B) Luteal phase defect:

Inadequate growth and functional of corpus luteum resulting in decreased progesterone secretion

The LPD is due to:

Drug induced ovulation
Hyperthyroidism
DUB
Pelvic endometriosis

(iii) Luteinised Unruptured follicle :

In this condition the ovum is trapped inside the follicle. Which:

- Pelvic endometriosis
- Hyperprolactinaemia

II. **Tubal and peritoneal phase & factor :**

Tubal factor:

- Tubal infection
- Peritubal adhesion following pelvic surgery
- Infection or pelvic endometriosis

Peritoneal factor :

- Mild endometriosis
- Adhesion (pelvic)

III. Cervical & Uterine factor

Uterine factor:

- Uterine hypoplasia
- Uterine fibroid
- Tubercular endometriosis
- Uterine synachie
- Congenital male formation of uterus

Cervical Factor:

(a) Anatomical:

- Congenital elongation of the cervix
- Retroverted uterus
- Second degree uterine descent

(B) Physiological :

- Purulent cervical discharge as in chronic cervitis.
- Presence of antisperm or sperm immobilizing antibodies in cervical mucous.

IV. Vaginal factor :

- Atresia of vagina
- Transverse vaginal septum
- Vaginitis & purulent discharge

V. Combined factor

- Advance age of male & female
- Lack of knowledge about coital techniques

- Dyspareunia
- Anxiety
- Use of lubricant during inter course

Q.3 How will you proceed to investigate a female anovular infertility?

Ans. **Investigation of female infertility:**

Female Investigation:

I. History:-

- Age
- Duration of marriage
- History of previous married

ii. Medical history:

- tuberculosis
- Diabetes
- STD
- PID

iii. Surgical History: any abdominal or pelvic surgery.

iv. Menstrual history:

Menstrual abnormalities such as hypo, oligo, amenorrhoea.

v. **Previous obstetric history:** It includes number of pregnancy, interval between then & any pregnancy related complication such as premature rupture of membrane or puerperal sepsis.

vi. Contra ceptive practice; IUCD

V. Sexual History:

Such as dyspareunia and loss of libido,

II. Examination

1. General examination:

- Obesity/weight loss
- Abnormal distribution of hairs
- Under development of secondary sexual characters, features of PCOD includes hirsutism & inappropriate galactorrhoea.

2. Systemic Examination: Includes hypertension, chronic heart disease, renal disease, endocrinopathies

3. Speculum examination:

May reveal abnormal cervical discharge

4. Other investigation:

Ovarian factor: Anovulation, Oligovulation, Luteal, phase defect, luteinized unruptured follicle.

I. Diagnosis of ovulation:

The various method use is practice to detect ovulation are:

- Indirect
- Direct
- Conclusive

(1) Indirect: This method includes :

- A. Menstrual history
- B. Regular or irregular

- Mild menstrual bleeding/pain/excessive vaginal discharge.
- Feature of pre menstrual syndrome or primary dysmenorrhoea.
- Evaluation of peripheral or end organ changes due to oestrogen & progesterone.

b) Basal body temperature:

There is biphasic pattern of temperature variation in ovulatory cycle. There is no rise in the temperature through out the cycle in anovulatory cycle.

Procedure:

- The pt. is instructed to take her oral temperature daily on the waking in morning before rising out of the bed.
- The temperature is also recorded on special chart. Day when intercourse takes place should also be noted on the chart.

Inter Pretation:

- The body temperature maintain through out the first half of cycle is raised to 0.5 to if following ovulation. The rise sustains through out the second half of the cycle & falls about to second day prior to the next period called biphasic pattern.

Clinical Importance:

- Maintenance of BBT chart during investigation helps in determine ovulation, endometrial biopsy, cervical mucous study. It also helps the couple to determine the fertile period if the cycle is irregular.

c) Cervical mucous study:

- Alteration of the physiochemical property of the cervical mucous occurs due to effect of oestrogen & progesterone.
- Disappearance of fern pattern beyond 22 days of the cycle which present in the mid cycle is suggestive of ovulation.
- Persistence of fern pattern even beyond 22 days suggest to Anovulation.

d) Vaginal cytology:

- A single smear on 25 or 26 days of the cycle reveals features of progesterone effects if ovulation occurs.

e) Hormonal estimation:

Serum progesterone estimation

1 st day	8 th day	22 nd day
O	– 1mg/ml	– 6-8 ng/ml

If ovulation occur

Serum LH – LH surge – 34 to 36 hrs before ovulation

Serum oestradiol

- Serum oestradiol attains the peak rise approximately about 24 to 36 hours prior to ovulation.

f) Endometrial biopsy:

- Biopsy is to be done on 21st to 23 day of the cycle.

g) Sonography:

The feature or recent ovulation by sonography are collapsed follicle & fluid in the pouch of Douglas.

1. **Direct method:** Laparoscopy visualization of recent corpus luteum or detection of the ovum from the aspirated peritoneal fluid from the pouch of Douglas is the only direct avoidance of evolution.

2. Conclusive:

- Pregnancy is the surest avoidance of ovulation
- II) Luteal phase defect (LPS)
- BBT chart
- Endometrial biopsy
- Serum progesterone estimation
- III) Lutenised unruptured follicle (LUF)
- Sonography, laparoscopy, ovarian biopsy.

Q.4 What are the management of female infertility?

Ans. Treatment of female infertility:

- The treatment modalities in female infertility are grouped as follows:
 1. Ovulatory dysfunction
 2. Tubal & peritoneal dysfunction
 3. Associated disorder like endometriosis, infections or endocrinopathy
 4. Cervical factor
 5. Immunological factor
 6. Utero-vaginal canal
 7. Unexplained infertility
 8. ART (Assisted reproductive technology)

1. Ovulatory Dysfunction:

It includes

- i. Anovulation
- ii. LPD
- iii. LUF
- iv. Anovulation

Induction of ovulation:

- To facilitate effective folliculogenesis & ovulation, the following may be prescribed.
 - (a) General
 - (b) Drug
 - (c) Surgery

(A) General:

- Psychotherapy to improve the emotional upset.
- Improvement of nutrition & weight gain
- Weight reduction in obese person a in pcos.

(B) Drug

- Drug used in induction of ovulation
- Clomiphene citrate – 50–250 mg daily
- HMG (FSH 75 9 U + LH 75 IU)
- FSH hormone
- HCG
- GNRH analogous buserlin, goserlin
- Growth hormone

Drug used in reduction of the raised level

- Androgen – Dexamithasone
- Prolactine – Bromocriptin
- Insulin –metformin

Drug used as substitution therapy

- Hypothyroidism thyroxin
- Diabetes mellitus antidiabetic drugs

Monitoring during ovulation induction

- **BBT (Basal Body Temperature)**
- Cervical mucous study
- Estimation of plasma oestrogen level
- Ultra sonography for growing follicles

Surgery:

(a) Surgery for PCOS

- **Bilateral Wedge Resection of the ovary:**
- Laparoscopic ovarian diathermy & lasar vaprisation as on alternative to wedge resection.

(b) Appropriate surgery for pituitary prolactionoma

(c) Surgical removal of other ovarian & adrenal tumour.

2. Luteal phase defect:

- (a) Natural progesterone Lomg thrice daily starting from the day of ovulation
- (b) HCG
- (c) In unresponsive cases clomiphene citrate may be tried

(C) Lutenised unruptured follicle :

- (a) HCG
- (b) Bromocriptine therapy

(2) Tubal & peritoneal factors :

The following guidelines are prescribed:

- i. Pre-operative assessment & planning for surgery has to be done by HCG & laparoscopy.
- ii. Prior counseling of the couple about the hazards of surgery & prospect of future pregnancy should be done.
- iii. Presence of hydro salpinx or gross tubal damage requires their removal to prevent recurrent infection IVF - ET should be considered for such a situation.
- iv. In tubercular salpingitis surgery to be withheld following ant tubercular therapy.

Surgery:

- Tuboplasty

3. Endometriosis & endocrinopathies:

- Endometriosis with involvement of the ovary or moderate endometriosis should be treated with drugs or surgery or both.

(A) Hormones:

(i) Progestogens:

- Medroxy progesterone acetate
- DANAZOL
- Gastrinone
- GnRH analogous

(1) Conservative surgery:

- The conservative surgery can be done by conventional **Laprotomy or by laparoscopy**
- The surgery includes
- Diathermy

- Laser vaporization
- Resection of endometriomass

(ii) Radial Sugary:

- This is indicated in cases of severe endometriosis who have completed the family.
- Radical surgery means hysterectomy with bilateral salpingo – oophorectomy along with resection of endometrial tissues.

Treatment of Endocrinopathies:-

- Hormonal & surgery for tumour.

Cervical Factor

- Cervical mucous protects sperm from the hostile environment of the vagina & also from phagocytosis.
- The cervical muscous quality can be improved by weak alkaline douching or conjugated oestrogen (1.25 mg orally) in the follicular phase.
- Improved cases of it clotrachomatis or M. hominis, doxycycline 100 mg twice daily for 14 days is to be given to both the partners.
- Cervical factor when can not be treater is over come by ART procedure.

Like – IUI, IVF, or GIFT

5. Immunological factor:

- In the presence of antisperm antibodies in the cervical mucous, dexamithasone 0.5 mg at bed time may be given.

6. Utero vaginal surgery:

- The operations in the uterus to improve the fertility includes:
 - a. Myomectomy
 - b. Metroplasty
 - c. Adhesiolysis with insertion of IUCD in uterine synachiae
 - d. Enlargement of the vaginal introitus or removal of vaginal septum
 - e. Apart from cauterization, amputation of the cervix may have to be done for congenial elongation of cervix.

7. Unexplained infertility

- It is storage that 90-80% patient of unexplained infertility become pregnant with in 3 years without having any specific treatment.

- ART should be employed.

8. Combined Factor:

- The faults defected in both the partners should be treated simultaneously & not one after the other.

Q.5 Write a short note on Assisted Reproductive Technology (ART).

Ans. **Definition:**

ART includes all the procedures that assist the process of reproduction by retrieving oocytes from the ovary or sperm from the testes or epididymis.

Methods of ART:

1. Intra uterine insemination (IUI)
 - AIH (Artificial Insemination husband)
 - AID (Artificial insemination donar)
2. IVF-ET (Invitro Fertilization & embryo transfer)
3. GIFT (Gamete intra fallapian transfer)
4. ZIFT (Zygote intra fallopian transfer)
5. ICSI (Intra Cytouplasmic sperm infection)

Methods of sperm recovery:

1. Testicular sperm extraction (IESE)
2. Micro surgical epididymal sperm aspiration (MESA)
3. Percutaneous epididymal sperm aspiration (PESA)

Unit IV

Pelvic Infections

Q.1 Describe the etiology, sign and symptoms, and treatment of acute, Bartholinitis?

Ans. **Acute Bartholinitis:-**

Definitions: Inflammation of Bartholin's glands

Etiology : Causative Organism Are:

1. Mostly Gonococcus
2. Others – Pyogenic Organism

Eg: Coli
Staphylococcus
Streptococcus
Chlamydia trichomatis

Sign and symptoms :

1. Local pain at vulva
2. Difficulty in walking/sitting
3. Tenderness present
4. Discomfort
5. Induration at the posterior half of the labia during palpation.
6. Mouth of the duct may be seen as it is surrounded by red areola, on pressing the gland by fingers. Discharge secretion is seen to come out

Investigations:

1. Blood for TLC, DLC, HBQ, VDRL
2. Urine – general examination culture & sensitivity.
3. Urethral smear and gonococcus
4. Vaginal swab for culture or sensitivity.

Treatment :

1. **Rest** in bed
2. Hot compression over the area

3. Analgesics to relieve pain
4. Sedative if necessary
5. Systemic antibiotics like ampicillin 500 mg orally 8 hourly.

Q.2 What are the Bartholin's abscess and Bartholin's cyst?

Ans. **Bartholin's abscess:**

It is the superlative condition of glands.
Bartholin's abscess is the end result of acute bartholinitis. The duct gets blocked of fibrosis and the exudates pent up inside to produce abscess.

Bartholin's cyst: It is end result of acute barth lenities if condition is left untreated. These is closure of the duct or the opening of an aciness.

Treatment:

Surgical Treatment :

Marsupialization : Surgery for bartholin's cyst on the inner aspect of the labia minus first outside the hymenal ring. It also includes the vaginal wall and the cyst wall.

Medical Treatment:

1. Rest
2. Analgesics for pain
3. Antibiotic therapy

Q.3 Define trichomonas vaginitis. Describes its causes. Clinical features and management?

Ans. Trichomonas Vaginitis/Trichomoniasis

It is most common and generally occurs in child bearing age.
This commonest form of sexually transmitted vaginitis is the parasitic infestation of the vagina by trichomonas vaginalis a parasite.

Causative organism:

Trichomonas vaginalis; pear shaped parasite

Mode of transmission:

- Exact way of infection is not known.
- It may be transmitted by:
 1. Sexual contact
 2. Improper personal hygiene
 3. Use of toilet articles from one women of other or through examining gloves.

Clinical Features:

Age: The patient is in child bearing age.

Symptoms :

1. Thick vaginal discharge : characteristically it is sudden profuse & offensive
- Frothy mucoid
- Muco purulent/greenish
4. Itching and irritation inside and around the vaginal interoitus
5. Dyspareunia
6. Dysuria or frequency of micturition

Sign:

On speculum examination

1. The vaginal discharge is copious greenish yellow, frothy & offensive.
2. Red, swollen & tender vagina
3. "Strawberry" apprance of cervix on speculum examination.

Treatment:**Principles :**

1. To destroy the parasite by some germicide applied locally or orally.
2. Husband and wife should be treated at the same time to prevent re-infection.

Medical Treatment:

- Metronidazole 200 mg thrice daily orally for 1 week.
- Husband should be given the same treatment schedule for 1 week.
- The husband should use condom during coitus.
- If symptoms persist a second course, treatment is given after an interval of 7 days.
- To prevent recurrence gives the treatment schedule to both the husband & wife for 7 days following menstruation for three consecutive cycle. In this three month period, husband should use condom during coitus.
- If metronidazole is into created, vaginal tablets containing clotrimazole 100 mg are to be introduced in vagina for 6 consecutive nights.

It also eradicates monilial infection of vagina as well.

Q.4 What is vulvovaginitis ? What are the common causes of vulvo vaginitis?

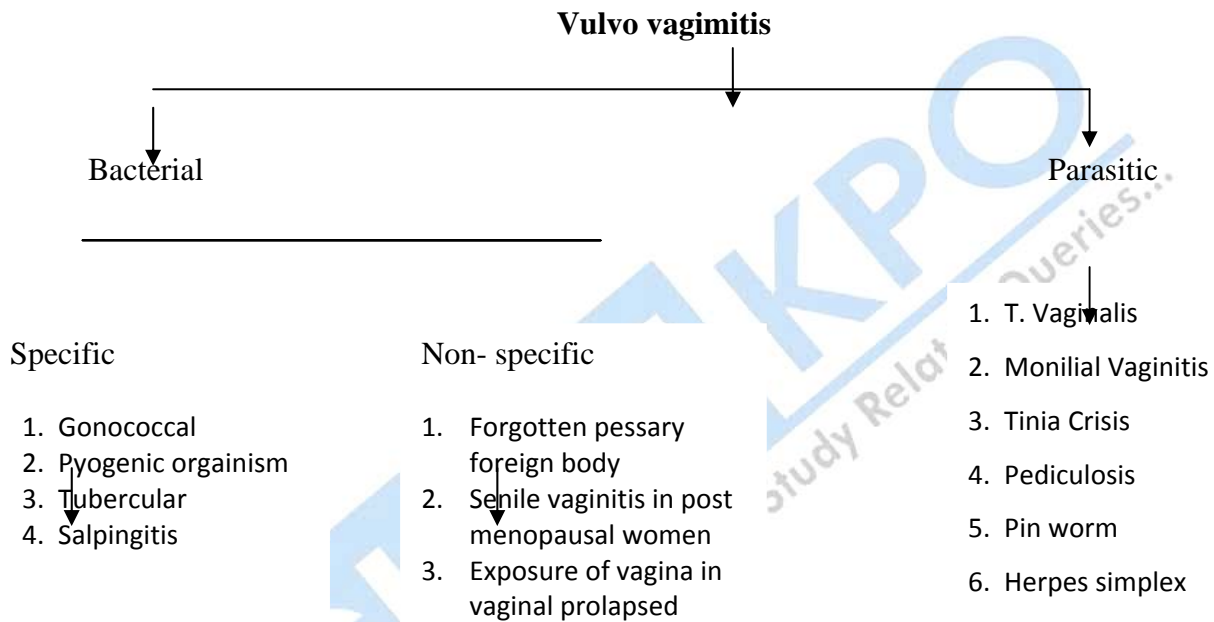
Ans. Vulnovaginitis means inflammation of the mucous membrane or lining of vulva as well as vagina.

It is commonest disorder during children. Due to lack of oestrogen, the vagina defense is lost and the infection occurs easily.

In children, vulvo vaginitis occurs due to :

- a. Gonococcal infection
- b. E. coli and other pyogenic organisms.
- c. Monilial and trichomonas

Main causes of vulvo vaginitis



Q.5 Define pelvic inflammatory disease (PID) Explain its causative organism and risk factors, mode of transmission, clinical features, complication & treatment.

Ans. Pelvic inflammatory disease:

Definition:

It is the infection and inflammation of the upper genital tract organs typically involving the fallopian tubes, ovaries and surrounding structures.

Acute PID includes :

- Acute endometritis
- Acute salpingitis
- Clinically it is most important PID
- Acute oophoritis
- Acute pelvic peritonitis

- Tube Ovarian mass

Note: Cervicitis is not included in PID.

Causative organism : (Polymicrobial infection)

I. Primary organism:

- N. Gonorrhoea – 30%
- Chlamydia Trachomatis
- Mycoplasma hominis

II. Secondary organism:

a) Anaerobic organism:

- Bacteriodes species-fragalis & biuius
- Peptococcus
- Pepto Streptococcus

b) Aerobic organism:

- Non-hemo cytic streptococcus
- E-Coli
- β streptococcus
- Staphylococcus

Mode of Transmission :

1. Through mucosal continuity & contiguity: Mostly gonococcal
2. Reflux of menstrual blood along with gonococci into fallopian tube.
3. Through lymphatic into tube: Mostly secondary organism

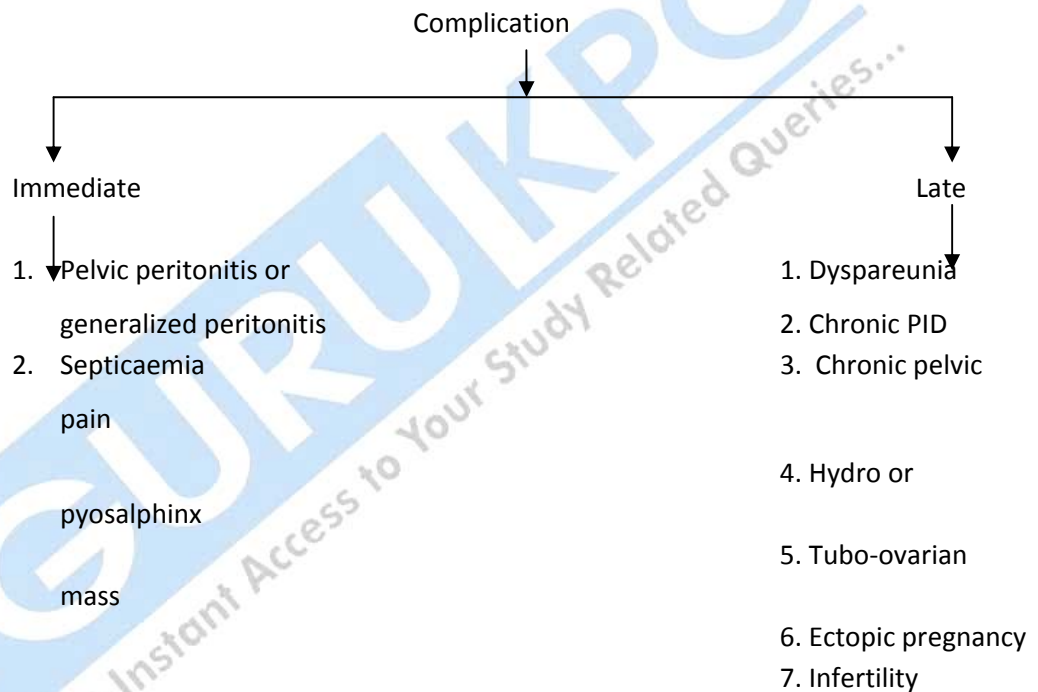
Clinical features:

Symptoms:

1. Bilateral lower abdominal and pelvic pain : Dull in nature
2. Irregular & excessive vaginal bleeding
3. Abnormal vaginal discharge :
 - Purulent or copious
 - Usually associated with lower genital tract infection
4. Fever, headache
5. Nausea & vomiting
6. Dyspareunia

Signs:

1. Temperature beyond 38°C
2. On abdominal palpation:
 - a. Tenderness on both the quadrants of lower abdomen
 - b. Enlarged & tender liver
3. On vaginal examination
 - a. Abnormal vaginal discharge
 - b. Speculum examination show congested cervix with purulent discharge from canal
 - c. On bimanual examination : Bitateral tenderness on fornix palpation which increase with movement of cervix



Treatment of PID:

Preventive aspect

1. Community based approach to increase public health and awareness
2. Prevention of STD with knowledge of healthy of safer sex.
3. Liberal use of contraceptives
4. Routine screening of high risk population.

Medical Management :

1. Bed rest
2. Analgesic
3. Out-patient therapy
 - Prescribe combined antibiotic therapy to the patient because infection is poly microbial in nature.
 - Patient should receive oral therapy for 7-14 days (any one)
 - ✓ Doxycycline – 100 mg twice a day
 - ✓ Erythromycine – 500 mg thrice a day
 - ✓ Tetracycline – 500 mg 4 times a day

For anaerobic coverage :

Metronidazole, 400 mg orally twice a day.

4. In patient therapy:
 - a. Patient should be hospitalized for antibiotic therapy in severe condition.
 - b. Provide bed rest
 - c. Restricted oral feeding dehydration and acidosis are to be corrected by I.V. fluids
 - d. I.V. antibiotic therapy for at least 48 hours.
 - ✓ Cefoxitin 2 gm IV 4 times a day for 2-4 days or
 - ✓ Gentamycine 2 mg/kg IV and
 - ✓ Metronidazole 500 mg IV every 8 hours

Surgical Management

1. Laprotomy
2. Occasionally the uterus, ovaries and fallopian tubes are removed if they are involved by the infection.

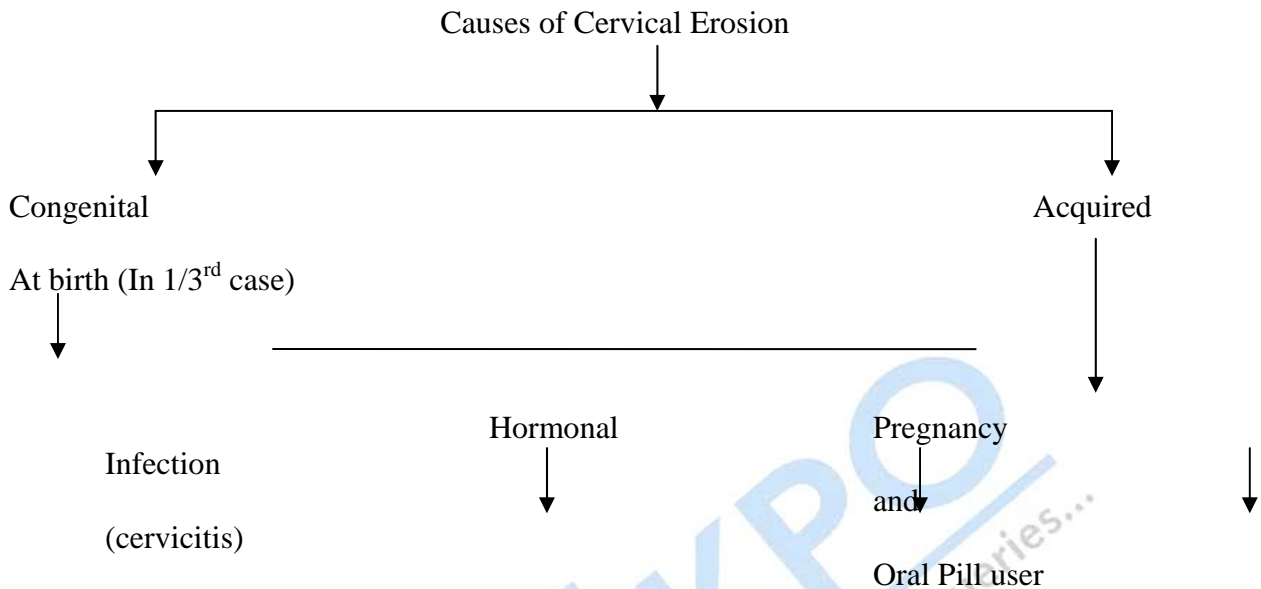
Education During Discharge :

1. Education the patient against multiple sexual partner.
2. Educate to use condom during coitus
3. Educating the patient to avoid re-infection and the potential hazards of it.

Q.6 Write a short note on cervical erosion.

Ans. Definition: Cervical erosion is a condition where the squamous epithelium of the ectocervix is replaced by columnar epithelium which is continuous with the endo cervix.

Etiology:



Clinical Features:

Symptoms:

1. Vaginal discharge : Mucopurulent, offensive and irritant in presence of infection
2. Contact bleeding specially during pregnancy or pill user following coius or defecation.
3. Constipation
4. Ceruicitis:
 - ✓ Pelvic pain
 - ✓ Bachache
 - ✓ Infertility

Sign: On speculum examination:

- ✓ External or of ectoceux becomes bright red.
- ✓ Non-tender non bleed to touch
- ✓ When rubbing with gauze piece, multiple, oozing spot may be present.

Diagnosis

1. Clinical examination (Sing and symptom)
2. Colposcopy

3. Pap's stain cervical scrape cytological examination

Management

1. In pill user, the 'Pill' should be stopped
2. Advised to use barrier methods
3. For their patient, weight gain improve cervical erosion.
4. Iron therapy for anemic patient
5. Administer antibiotic in case of cervicitis.
6. Waiting for automatically healing.
7. Syergy :
 - ✓ In case of persistence erosion with troublesome discharge
 - ✓ Electrocautry
 - ✓ Cryosugery
 - ✓ Laser vaporization

Q.7 What is meant by salpingitis?

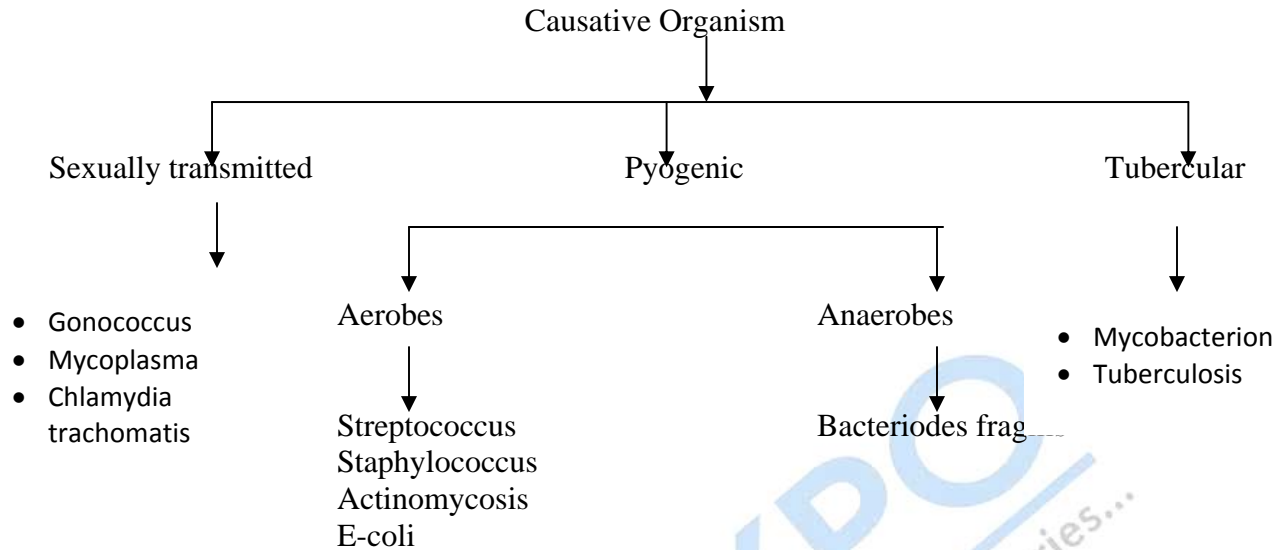
Ans. Salpingitis:

Means inflammation of the fallopian tubes.

In salpingitis, following facts are to be borne in mind:

1. The infection is usually polymicrobial in nature.
2. Both tubes are usually affected
3. Salpingo oophoritis occurs (close association of tubes & ovaries in the involvement of both when one is affected)
4. The tubal infection almost always affects adversely the future reproductive fuction.

Eausative organisms responsible for salpingitis:



Types of salpingitis :

1. Acute – Salpingitis
2. Chronic – Salpingitis

Q.8 What is leucorrhoea?

Ans. Leucorrhoea : An increase in amount of normal vaginal secretion is termed as leucorrhoea.

or

any non bloody (excuding urine/stool), non irritant, non- infective & non offensive vaginal discharge severe enough to stain the under garments is called leucorrhoea.

Leucorrhoea is never cause pruritis

Unit V

Uterine Displacement and Descent

Q.1 What are the various forms of displacement of uterus?

Ans. The various form of displacement of uterus are :

1. Ascent : The uterus being dragged upward
2. Decent or prolapse: The uterus being depressed down ward.
3. Anteversion: the uterus titled forward
4. Retroversion: The uterus titled forward
5. Lateroverion : The uterus titled laterally
6. Anteflexion: Bent on itself forward
7. Retroflexion : bent on itself backward or at the level of internal os
8. Lateroflexion: Bent on itself laterally
9. Inversion: the uterus being turned inside out.

Q.2 Define retroversion of uterus. What are the clinical types of retroversion?

Ans. Retroversion of uterus: When long axis of cervix and corpus are in a line & whole organs, turn backward in relation to long axis of birth canal is called as retroversion of uterus.

Generally normalcy position of the uterus is one of antiversion & anti flexion.

Clinical types of retroversion:

1. Mobile retroversion : With or with out symptom
2. Immobile retroversion: Almost always with symptom
3. Retroversion in pregnancy
4. Retroversion in puerperium.

But the degree of retroverted uterus are :

1. First degree : When the fundus is vertical & pointing downwards saeral promontory
2. Second degree : When the fundus lies at the level of internal os or lie in hollow of the racrum.
3. Third degree – funds lies below the level of internal os.

Q.3 How will you manage a case of retroverted uterus?

Ans. Management/treatment of retroverted uterus:

1. Preventive Measures:

- i. To regular urination after delivery.
- ii. Provide pelvic floor exercise to maintain tone of pelvic muscles
- iii. To encourage lying in prone position for half to one hour once or twice daily until 2-4 weeks after delivery.

2. Curative Treatment:

1. Pessary

Indications:

- i. In sub involution of uterus
- ii. In case of unexplained infertility & recurrent early abortion.
- iii. When operation is contraindicated
- iv. In retroverted gravid uterus Jusact a hodge smith type of pessary after anteverting the uterus.
 - If symptoms are relived then retroversion was the cause and this has to be continued.
 - If symptoms persists a ring pessary is introduced.

3. Surgery :

Indication:

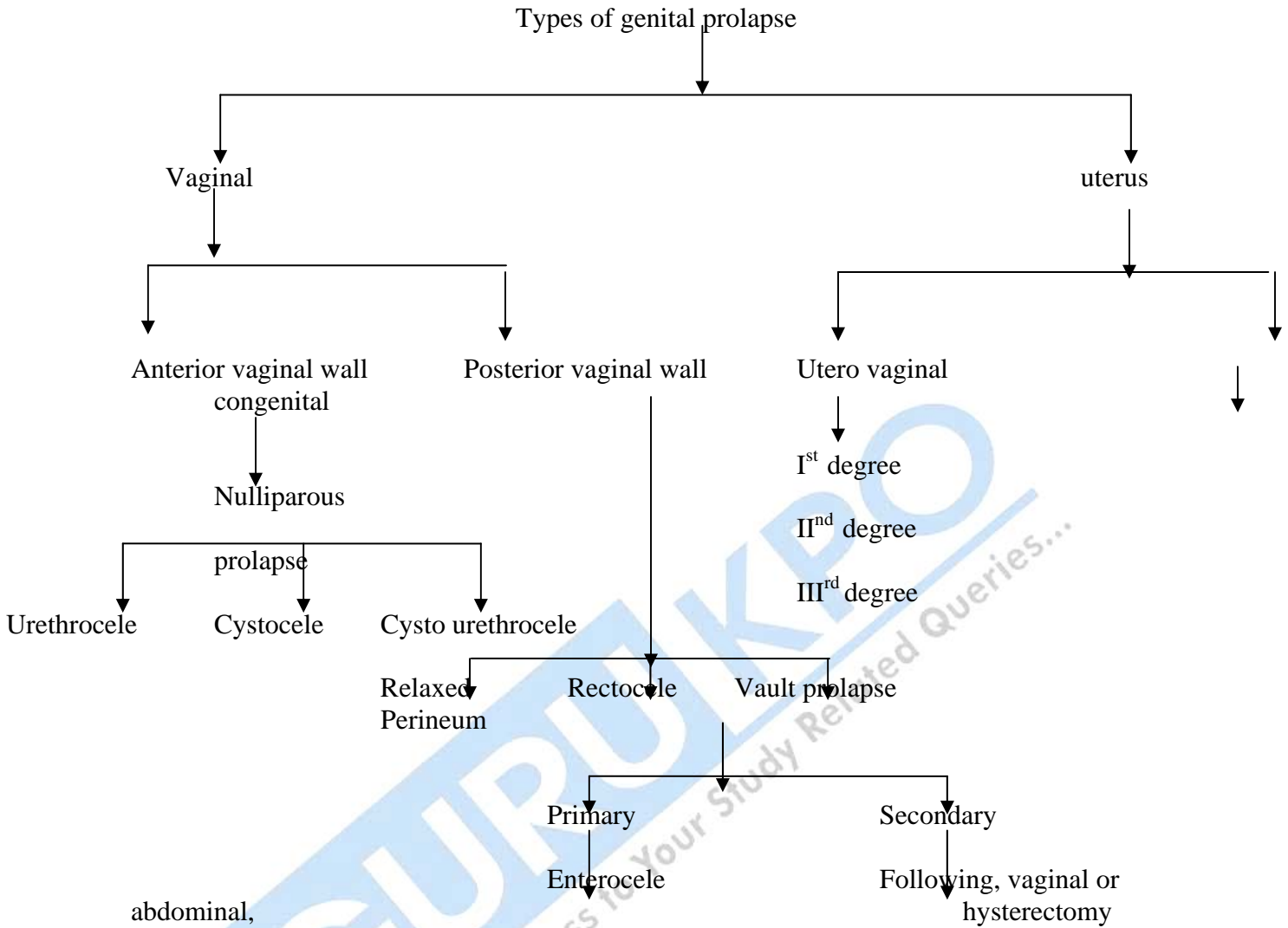
- a. Fixed retroverted uterus producing backache or dyspareunia.
- b. When pessary test is positive.

Principle of surgical correction is ventrosuspension of the uterus by shortening the sound ligaments of both the sides extraperitoneally to the undersurface of the anterior sectus sheath.

Q.4 What is meant by genital prolapsed ? State the different types of prolapse.

Ans: Genital prolapse: Downward displacement of any structure of the pelvic floor constitutes prolapsed. or

Hermiation of pelvic organs through the vagina in called genital prolapse.



Q.5 Describe the prolapse of uterus, its causes, and treatment.

Ans. Uterine prolapsed/prolapsed of uterus:

It means downward descent of uterus and vagina. Uterine prolapse is always accompanied by vaginal prolapse.

It is infact a form of hernia.

Degree of uterine Prolapse:

1. First degree: Slight descent of the uterus but cervix (external OS) remain inside the uagina.
2. Second degree: External os project outside the vaginal interoitus but the uterine body remain inside when women is straining or standing.
3. **Thir degree (complete prolapse)** : the entire uterus prolapses outside the vulva.

Causes of uterine prolapse:

- I. Predisposing factors :
 1. Congenital or developmental weakness of the support

Anatomic and functional abnormality

2. Injury sustained during child birth (acquired factor)
 - a. Difficult vaginal delivery
 - b. Overstretching of the endopelvic fascial sheath of the vagina.
 - c. Overstretching of perineum
 - d. Subinvolution of supporting structure.
 - e. Prolonged labour
 - f. Repeated & frequent child birth

II. Activating/aggravating factors

1. Increase intra abdominal pressure caused by chronic cough, constipation.
2. Malnutrition
3. Increase weight of the uterus, resulting from sub involution.
4. Traction of the uterus by anterior vaginal wall or cervical polyp.

Sign and symptoms:

Symptoms:

1. The usual symptoms is that something comes out from vagina
2. Discomfort
3. Bladder symptoms
 - Increase frequency & urgency
 - Stress in continence
 - Retention of urine
 - Painful maturation
4. Rectal symptoms
 - Constipation
 - Difficulty in passing of stool
5. Vaginal discharge
6. Bachache
7. Haemorrhage

Signs :

- The type & extent of the Prolapse can be usually detected by asking the patient to bear down or cough.
 - Early prolapse can be determined by palpation.
 - In case of utero-vaginal (UV) prolapse of 2nd & 3rd degree, the cervix will be found to lie below the introitus of the vagina.
 - Rectal examination : to differentiate rectocele & uterine prolapse:
 1. Preventive measures
 2. Conservative treatment
 3. Surgical treatment
- I. Preventive measures:
- a) Provide good antenatal care
 - b) Provide good intranatal care
 - i. Prevent premature application of forceps
 - ii. Avoid premature bearing effort
 - iii. Avoid prolong second stage of labour
 - iv. Perform timely & adequate episiotomy
 - v. Avoidance of fundal pressure.
 - c) To provide good post natal care
Early ambulation
Provide pelvic floor exercise.
 - d) To provide General care
- II. Conservative treatment: pessary treatment
- III. Surgical treatment:
- i. Anterior colporrhaphy for anterior vaginal wall prolapse
 - ii. Posterior colpo perinorrhaphy
 - iii. Pelvic floor repair (PER) :
Both anterior & posterior
Vaginal wall prolapse
 - iv. Vaginal hysterectomy with PFR
 - v. Repairing of vault prolapse
 - vi. Repair of enterocele

B) For uterine prolapse

a) Fothergill or Manchester operation:-

- Dilatation of cervix
- Amputation of cervix
- Placement of ligament.

Q.6 What is Cystocele?

Ans. Cystocele: It is most frequent type of genital prolapse. It is descent of urinary bladder with anterior vaginal wall below the cervix.

Laxity of upper half of the anterior vaginal wall and herniation of bladder wall through it.

Degree of cystocele:

1. Mild degree: bladder descends in vagina below the cervix
2. Moderate degree: Bladder descends in vagina up to the vaginal introitus
3. Severe degree : bladder descends outside the vaginal introitus.

Send your requisition at

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