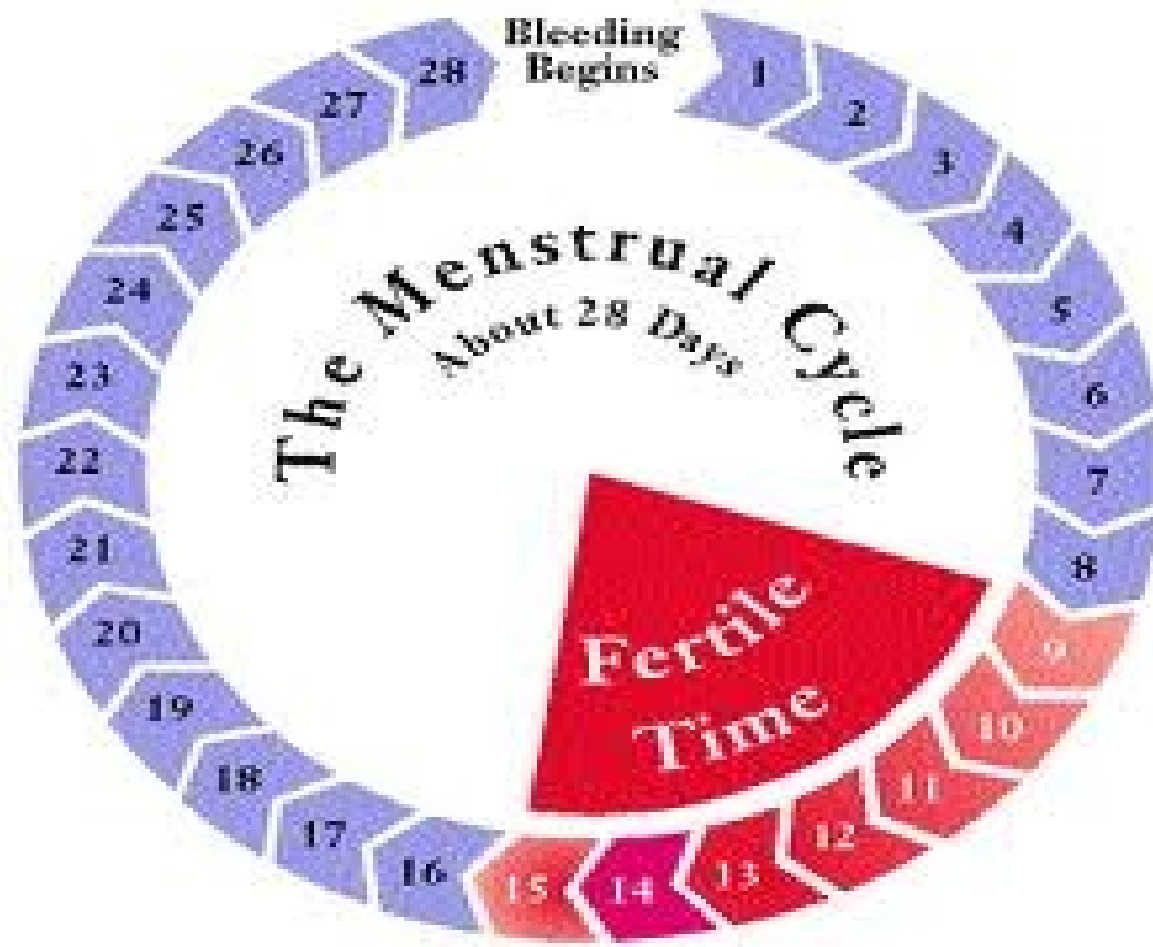


MENSTRUAL IRREGULARITIES

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INTRODUCTION



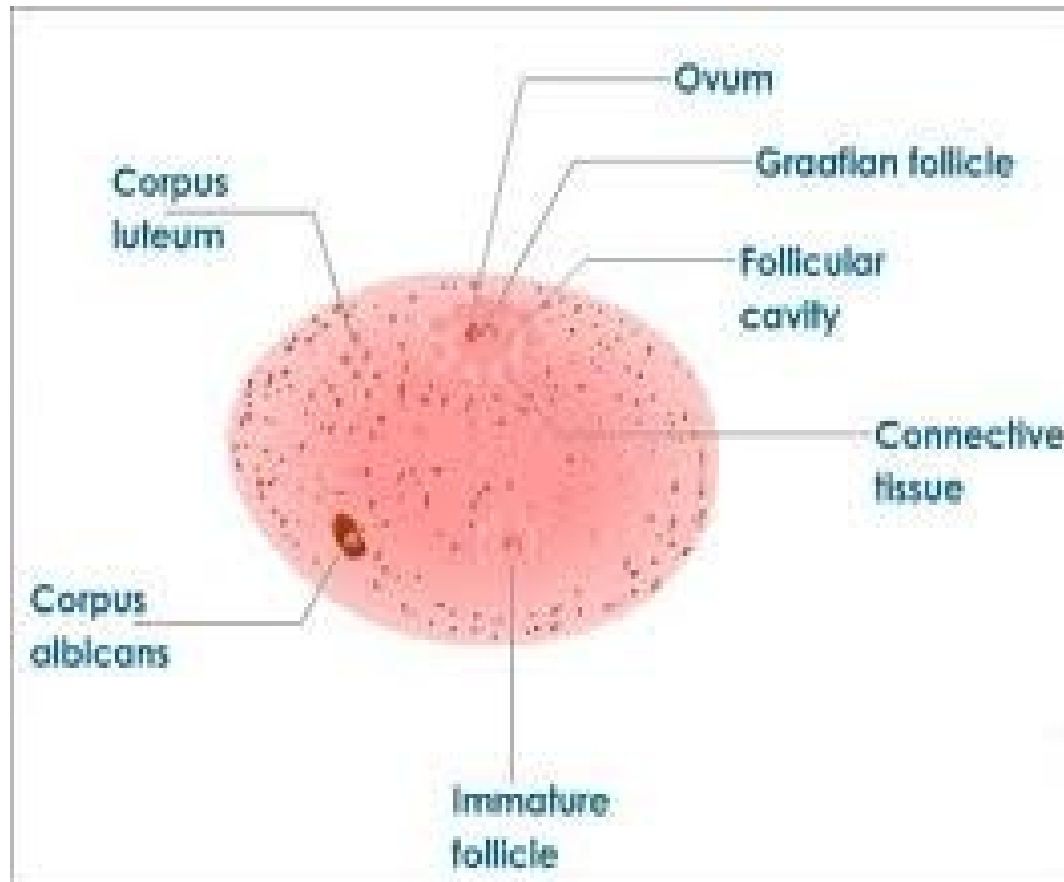


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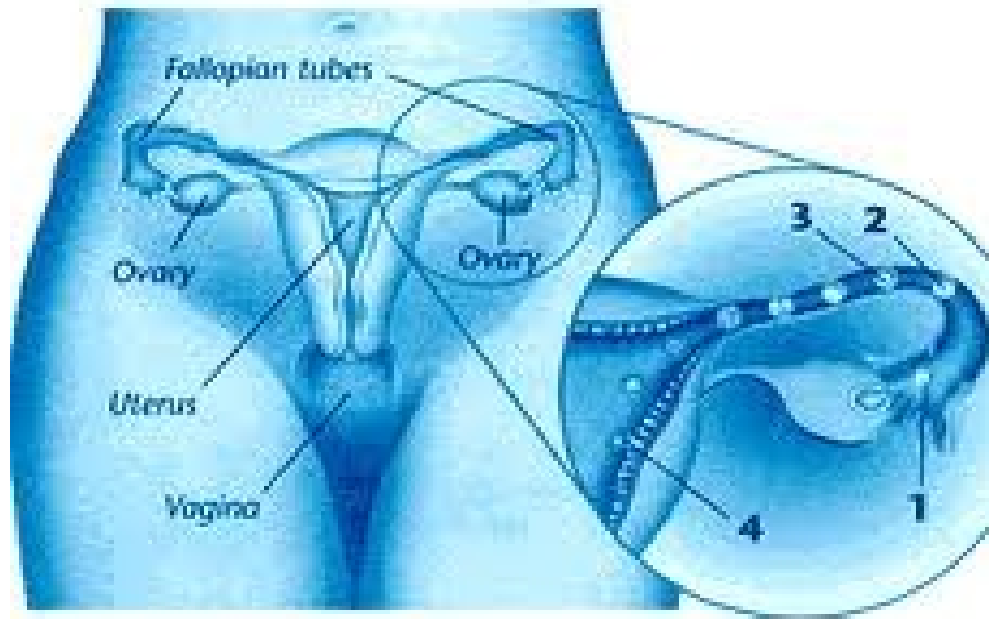


*As we get older,
life gives us a lot of
ups and downs...*

FOLLICULAR PHASE

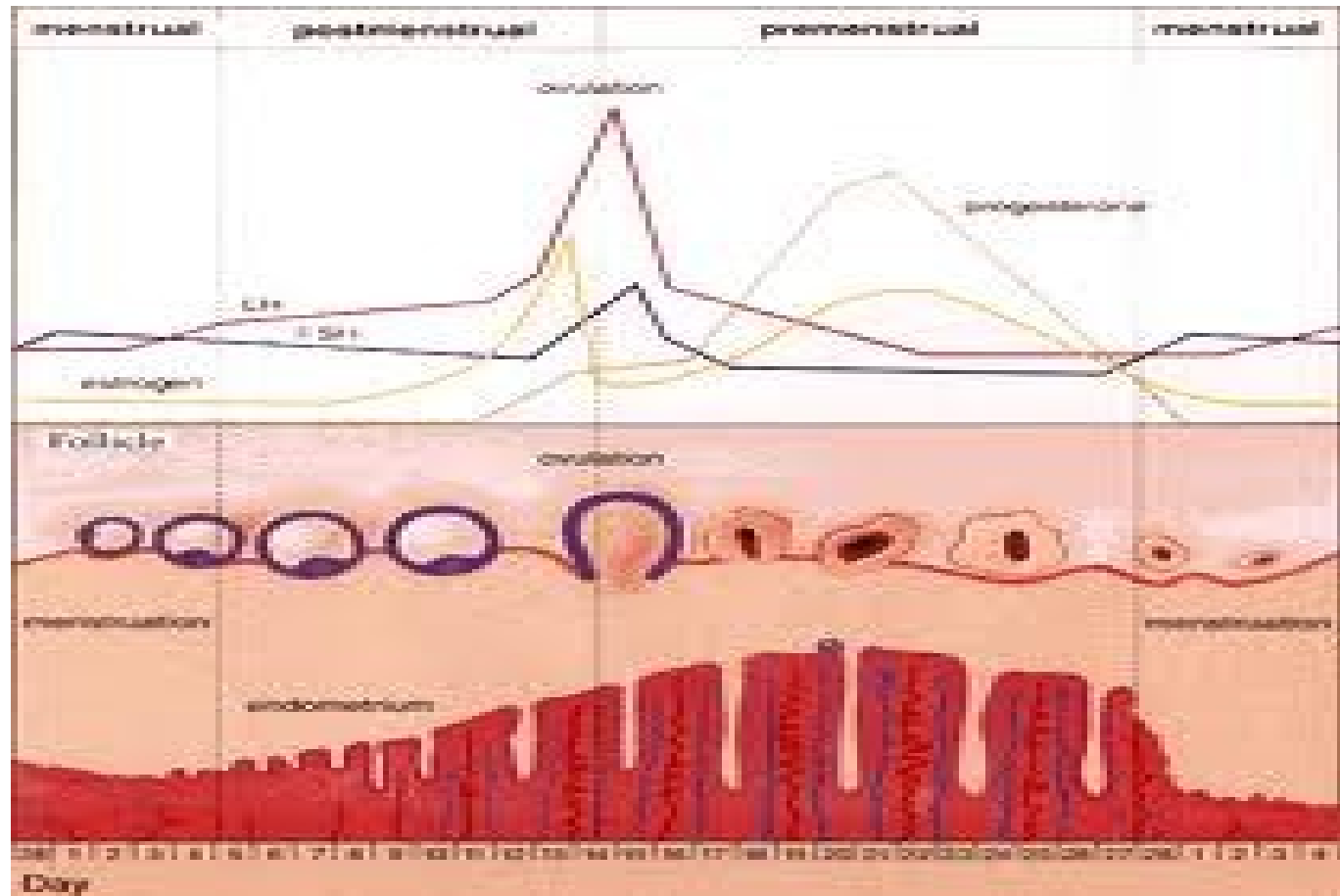


OVULATION



Each month during ovulation an egg is released (1) and moves into one of the fallopian tubes (2). If a woman has sex around this time, an egg may meet a sperm in the fallopian tube, and the two will join (3). This is called fertilization. The fertilized egg then moves through the fallopian tube into the uterus and becomes attached there to grow during pregnancy (4).

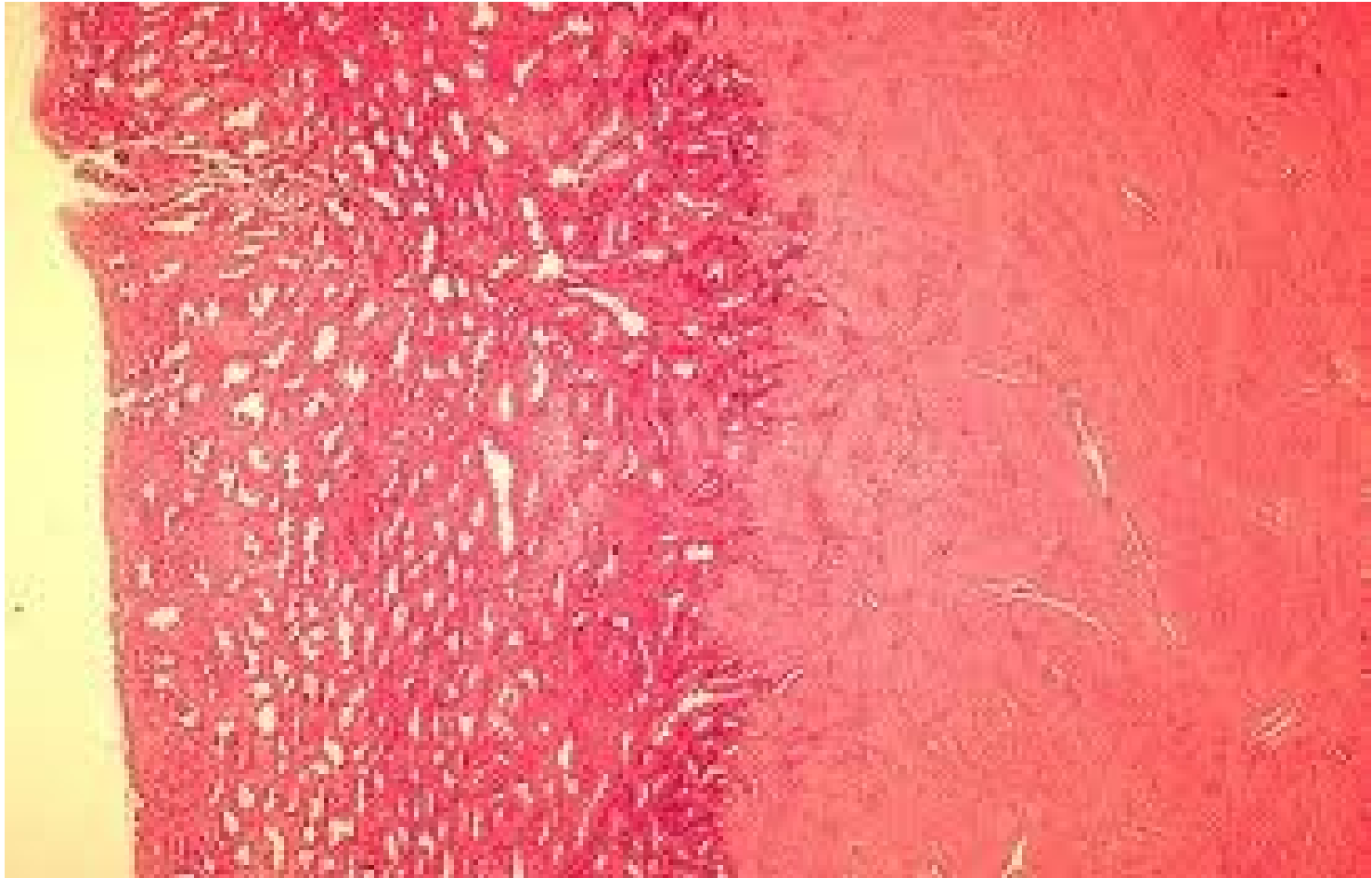
LUTEAL PHASE



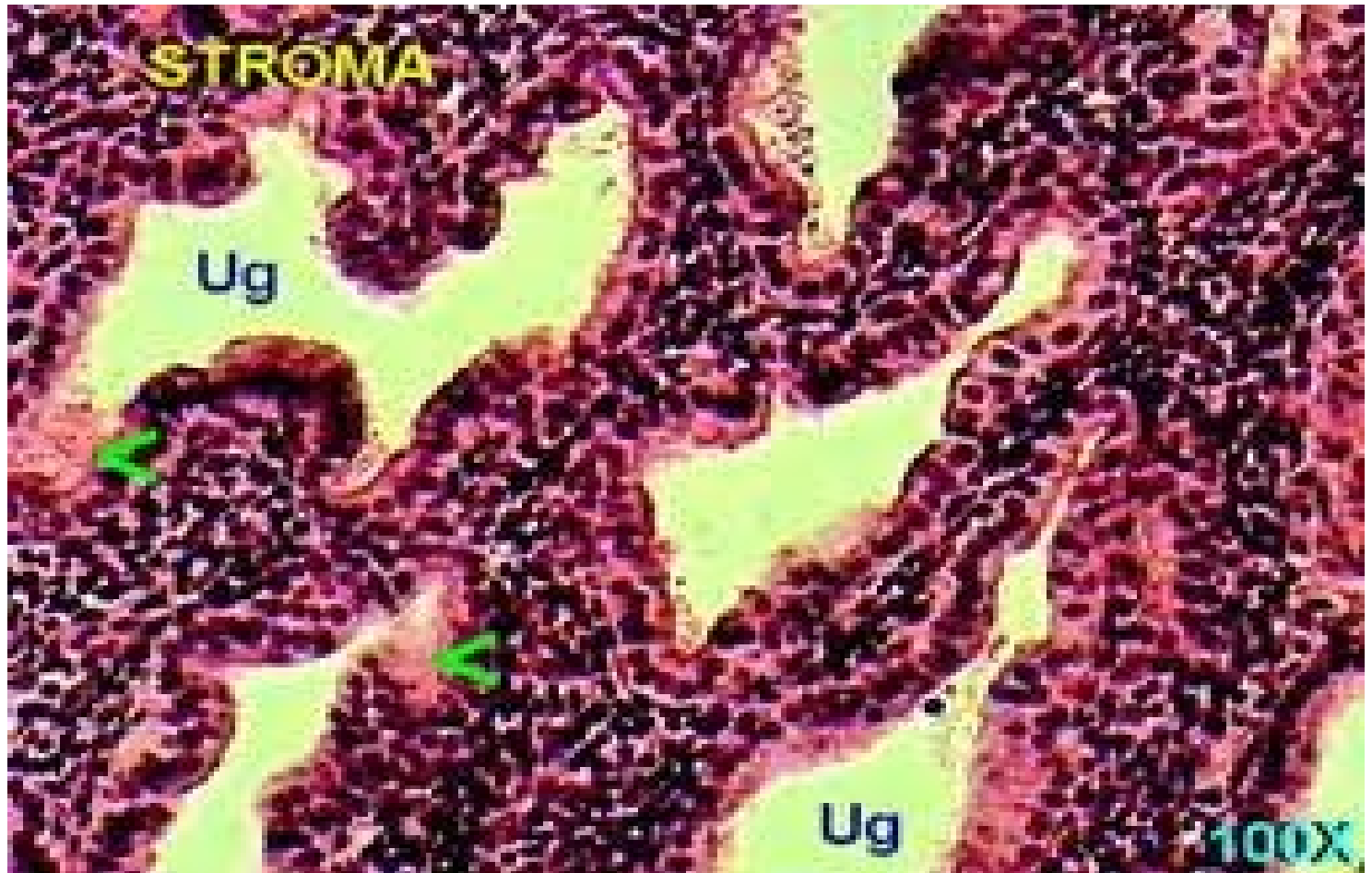
MENSTRUAL PHASE



PROLIFERATIVE PHASE



SECRETORY PHASE



menstrual irregularities

Menstrual irregularities
are common
abnormalities of a
woman's menstrual
cycle.

TYPES

- **Disorders of ovulation**
- **Disorders of cycle length**
- **Disorders of flow**
- **Disorders of pain**

Disorders of ovulation

1. OLIGOOVULATION

Oligoovulation is seen in women with irregular cycles, or very long cycles (more than 50 days).

CAUSES

- The ovaries were surgically removed.
- The ovaries were damaged by radiotherapy or chemotherapy treatment for cancer.
- The ovaries have no eggs such as Turner Syndrome or only have a few eggs in them i.e. premature menopause
- The woman was born without ovaries.
- Some women have polycystic ovaries

Secondary causes

- It is due to the lack of hormones released from the pituitary gland or hypothalamus.
- Severe stress.
- Recent weight gain or loss of weight.
- Certain drugs.
- Tumor (growth).
- Excess production of the hormone prolactin.
- Disturbances involving the thyroid gland and the adrenal glands.

Clinical features

- Weight Gain or Inability to Lose Weight
- Absent or Irregular Periods
- Excess Hair Growth (Hirsutism)
- Thinning Hair.
- Skin Problems
- Mood Swings

Diagnostic evaluation

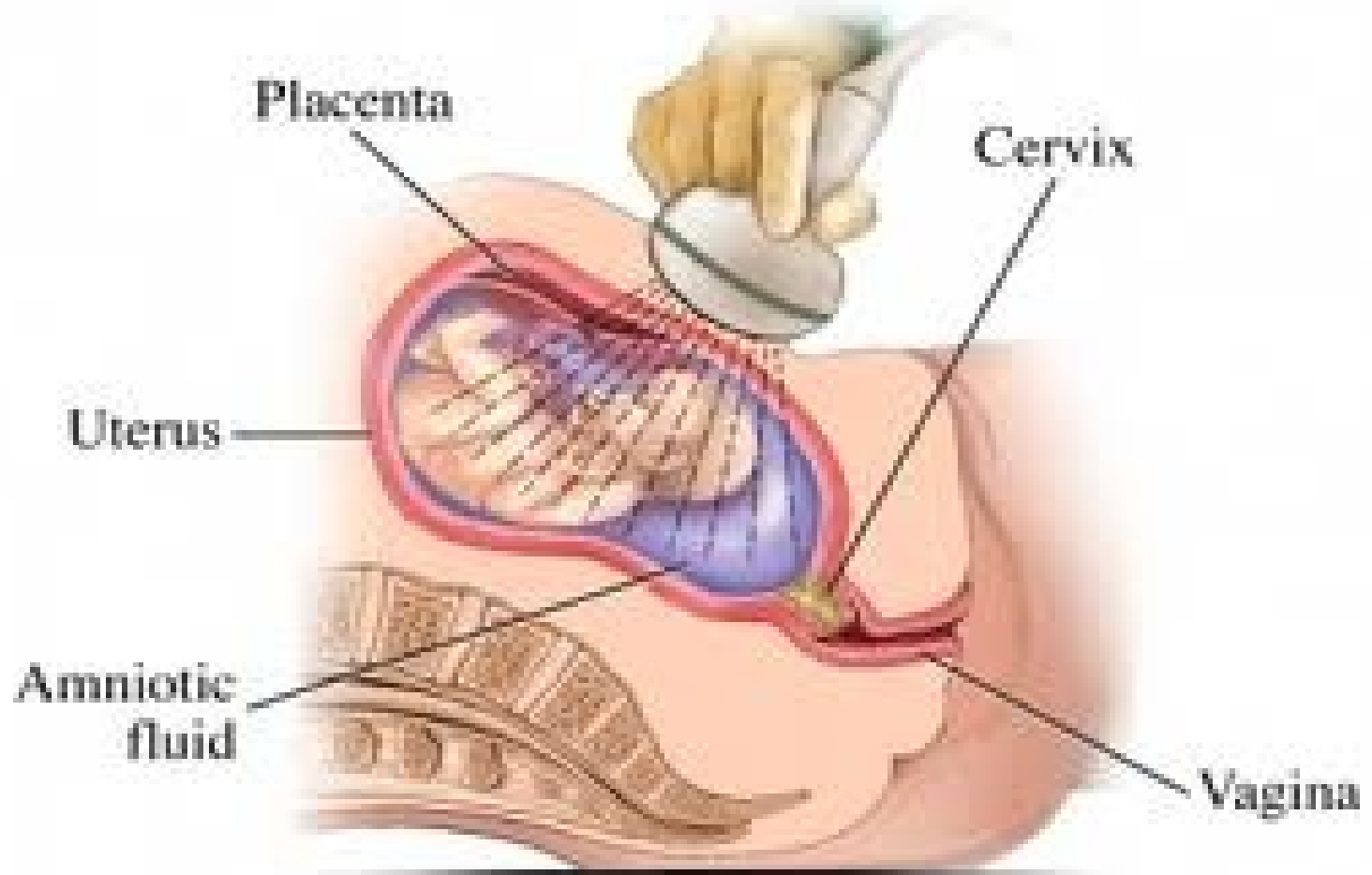
- Detailed medical and gynecological history
- General physical examination



- Blood investigation
- Plasma progesterone concentration



ultrasound examination



Treatment

- Clomiphene one tablet daily for 5 days
- Treatment with human menopausal gonadotropin

2. Anovulation

- An anovulatory cycle is a menstrual cycle during which the ovaries do not release an oocyte.

Causes

- Hormonal or chemical imbalance
- Hyperprolactinaemia
- Polycystic ovarian syndrome
- Functional problem

Clinical features

- Amenorrhea
- Infrequent and light menstruations occur in about 40% of women with anovulatory dysfunction.
- Irregular menstruation,
- breast pain or tenderness
- Increased body and facial hair

Treatment

Clomifene citrate is a very efficient ovulation inductor, and has a success rate of 67%. It has also anti-estrogenic effect and decrease the motility of the fallopian tubes and the maturation of the oocytes.

- anti-estrogenic drug tamoxifen is often used in the prevention
- Follicle-stimulating hormone (FSH or recombinant FSH)
- The gonadotropin-releasing hormone has also been used in certain cases of hyperprolactinemia.
- Bromocriptine acts in a completely different manner to the other treatments mentioned above.
- Corticosteroids (usually found in anti-inflammatory drugs) can be used to treat anovulation

3. Luteal phase defect

Luteal phase defect is a disruption in the normal female menstrual cycle. The defect occurs when the body does not produce enough of the hormone progesterone. This result in a delay in the development of the lining of uterus (endometrium).

Risks factors

- A history of unexplained infertility
- A history of repeated miscarriages

Clinical features

The main symptom is
short or irregular
menstrual cycles

Diagnostic evaluation

- A biopsy of the endometrium for diagnosing luteal phase defect.
- Estimation of blood serum progesterone level of lower than 10ng/ml.

Treatment

- Progesterone injections or gel (Crinone) are often used when luteal phase defect is suspected.
- If there is evidence that low FSH (follicle stimulating hormone) is present with luteal phase defects, clomiphene citrate may also be used.

DISORDERS OF CYCLE LENGTH

1. OLIGOMENORRHEA

Menstrual bleeding occurring more than 35days apart and which remains constant at that frequency is called Oligomenorrhea.

Causes

Causes

- prolactinomas (adenomas of the anterior pituitary).
- Graves disease
- polycystic ovary syndrome (PCOS)
- Anorexia nervosa
- Bulimia nervosa
- emotional stress
- chronic illness
- poor nutrition
- excessive exercise

Clinical features

- menstrual periods at intervals of more than 35 days
- irregular menstrual periods with unpredictable flow
- some women with oligomenorrhea may have difficulty conceiving.

Diagnostic evaluation

- History and physical examination
- Laboratory tests
- Imaging studies

Treatment

- ❑ Birth control pills
- ❑ PCOS, are treated with hormones
- ❑ Treating the eating disorders

2. POLYMENORRHEA (Epimenorrhoea)

Polymenorrhea is a type of abnormal uterine bleeding. Polymenorrhea occurs when the menstrual cycle is less than 21 days long, bleeding that occurs at regular intervals less than 21 days apart is usually Polymenorrhea.

causes

- stress
- excessive exercise
- Medications or perimenopause
- diseases of the pelvic organs
- hormonal disturbances
- polycystic ovarian disease

Treatment

Identification of the cause
and institution of specific
targeted therapy

3. Amenorrhea

Amenorrhoea is the absence of a menstrual period in a woman of reproductive age.

TYPES AND CAUSES

Primary amenorrhoea (menstruation cycles never starting) may be caused by developmental problems

- congenital absence of the uterus
- failure of the ovary to receive or maintain egg cells
- delay in pubertal development. (absence of secondary sexual characteristics by age 14 with no menarche or normal secondary sexual characteristics but no menarche by 16 years of age)

Secondary amenorrhoea

Hormonal disturbances from the hypothalamus and the pituitary gland

- premature menopause or intrauterine scar formation. (It is defined as the absence of menses for three months in a woman with previously normal menstruation or nine months for women)
- Pregnancy (most common cause)
- Anovulation
- Menopause
- Premature menopause
- Polycystic ovary syndrome
- Drug-induced

Treatment

Treatments vary based on the
underlying condition

4. Metrorrhagia

Metrorrhagia, also known as breakthrough bleeding or spotting, is uterine bleeding at irregular intervals, particularly between the expected menstrual periods.

- Dysfunctional uterine bleeding
- Endometriosis
- Adenomyosis
- Ectopic pregnancy
- Hormone imbalance
- Endometrial hyperplasia
- Polyps
- Endometritis
- Cervicitis
- Vaginitis

- Cervical cancer
- Uterine cancer
- Vaginal cancer
- Cervical cancer
- Endometrial cancer
- Primary fallopian tube cancer
- Ovarian cancer
- Uterine leiomyomas
- Enlarged uterus with menorrhagia

Treatment

Treating the underlying causes

DISORDERS OF FLOW

1. Menorrhagia (Hypermenorrhoea)

It is defined as cyclic bleeding at normal intervals; the bleeding is either excessive in amount (>80ml) or duration or both

CAUSES

- Abnormal blood clotting,
- Disruption of normal hormonal regulation of periods
- Disorders of the endometrial lining of the uterus
- Ectopic pregnancy
- Incomplete abortion
- Miscarriage
- Threatened abortion

Risk Factors

- Obesity
- Anovulation
- Estrogen administration (without progestogens)
- Prior treatment with progestational agents or oral contraceptives increases the risk of endometrial atrophy.

Treatment

- First line
 - Intra Uterine System insertion
- Second Line
 - Tranexamic acid an antifibrinolytic agent
 - Non-steroidal anti-inflammatory drugs (NSAIDs)
 - Combined oral contraceptive pills to prevent proliferation of the endometrium
- Third line
 - Oral progestogen (e.g. norethisterone), to prevent proliferation of the endometrium
 - Injected progestogen (e.g. Depo provera)
- Other options
 - Gonadotrophin-releasing hormone (GnRH) agonists (e.g. Goserelin)
-

Surgery

- Endometrial ablation
- Uterine artery embolisation (UAE)
- Hysteroscopic myomectomy to remove fibroids over 3 cm in diameter

2. Hypomenorrhagia

When the menstrual bleeding is unduly scanty and last for less than 2 days, it is called Hypomenorrhagia

Causes

Local

- Uterine synechiae
- endometrial TB

Endocrinal

- use of oral contraceptives
- thyroid dysfunction

Systemic

- malnutrition

Treatment

Treat the underlying
causes

3. Menometrorrhagia

Menometrorrhagia is a condition in which prolonged or excessive uterine bleeding occurs irregularly and more frequently than normal

Causes

- It can occur due to any of several causes, including hormonal imbalance, endometriosis, uterine fibroids, or cancer. It can lead to anemia in long-standing cases.

DISORDERS OF PAIN

1. Dysmenorrhoea

Dysmenorrhoea is the painful menstruation of sufficient magnitude so as to incapacitate day-to-day

PATHOPHYSIOLOGY

release of prostaglandins and leukotrienes in the menstrual fluid



produces vasoconstriction in the uterine vessels



causing the uterine contractions which produce the pain

Primary dysmenorrhoea

Primary dysmenorrhoea
occurs in young females
with no pelvic pathology

CAUSES

- Psychosomatic factors
- Abnormal anatomical and functional aspect of uterus
- Role of Vasopressin
- Role of prostaglandins

Clinical features

- Crampy pain in lower abdomen.
- Period pains may only develop 6-12 days after starting the first periods.
- The pain may spread to lower back, or to the top of legs.
- Pain usually starts as the bleeding starts, but it may start up to a day before.
- Pain usually lasts 12-24 hours, but lasts 2-3 days in some cases.

DIAGNOSTIC EVALUATION

- history collection and abdominal examination

MANAGEMENT

GENERAL MEASURES

- A warm bath
- Abdominal and/or back massage
- Lying in the supine position

- NSAIDs -
Non-steroidal anti-inflammatory drugs
- Oral contraceptive pills (OCPs)
- **Depo-Provera**

Surgery

- Laparoscopic uterine nerve ablation (LUNA)
- Hysterectomy
- Dilatation of the cervical canal

2. Membranous Dysmenorrhoea

It is one variety of primary dysmenorrhoea but it is rare. There is shedding of big endometrial casts during period. It is probably due to the deficiency in the tryptic ferment normally secreted in the endometrium. The treatment is same as primary dysmenorrhoea.

3. Secondary dysmenorrhoea

The painful menstruation that is caused by some specific disorder (as endometriosis).

- **Causes**

- Pelvic endometriosis,
- Uterine fibroids,
- Infection of the uterus and Fallopian tubes (pelvic inflammatory disease)
- Pelvic adhesions
- Adenomyosis
- Endometrial polyp
- IUCD in utero
- Pelvic congestion

Clinical features

- Crampy lower abdominal pain
- Pain appears 3-5 days before the period starts.
- Symptoms associated with pelvic pathology

Diagnostic evaluation

- Abdominal and Vaginal examination usually reveals the offending lesion. At times the lesion is revealed by laprotomy or laparoscopy.

Treatment

- The treatment aims at the cause rather than the symptom. The type of treatment depends on the severity, age and parity of the patient.

4. Mittelschmerz's syndrome

Ovular pain is not an infrequent complaint. It appears in the mid menstrual period. The pain usually situated in the hypogastrium or to one iliac fossa.

Causes

- Increased tension of the graafian follicle just prior to rupture
- Peritoneal irritation
- Contraction of the tubes and ovaries.

Treatment

- Treatment is effective with assurance and analgesics.

5. *Pelvic congestion syndrome*

There is disturbance in the autonomic nervous system which may lead to gross vascular congestion with pelvic varicosities. The patient has a congestive type of dysmenorrhoea without any demonstrable pelvic pathology.

Clinical features

- Backpain
- Pelvic pain
- Dyspareunia

Treatment

- Medroxy progesterone acetate (MPA) 50mg daily for 4 months was found effective. In parous women Hysterectomy may relieve the symptoms.

2. PREMENSTRUAL SYNDROME

Premenstrual syndrome (PMS) is a psychoneuro-endocrine disorder of unknown etiology, often noticed just prior to menstruation. There is cyclic appearance of large number of symptoms during the last 7-10 days of menstrual cycle.

Causes, incidence, and risk factors

The exact cause of PMS has not been identified.

Changes in brain hormone levels may play a role

- PMS may be related to social, cultural, biological, and psychological factors.
- The condition is estimated to affect up to 75% of women during their childbearing years.
- It occurs more often in women:
 - ✓ Between their late 20s and early 40s
 - ✓ Who have at least one child
 - ✓ With a personal or family history of major depression
 - ✓ With a history of postpartum depression or an affective mood disorder

Clinical features

- PMS refers to a set of physical, behavioral, or emotional symptoms that tend to:
- Start during the second half of the menstrual cycle (14 days or more after the first day of your last menstrual period)
- Go away 4 - 7 days after a menstrual period ends (during the first half of the menstrual cycle)
- The most common physical symptoms include:
 - Abdominal fullness, feeling gaseous
 - Bloating of the abdomen
 - Breast tenderness
 - Constipation or diarrhea
 - Food cravings
 - Headache
 - Less tolerance for noises and lights

Diagnostic Evaluation

- Complete medical history
- Physical examination (including pelvic exam)
- Psychiatric evaluation (in some cases)
- A symptom calendar can help women identify the most troublesome symptoms and confirm the diagnosis of PMS.

Treatment

- A healthy lifestyle is the first step to managing PMS.
- Drink plenty of fluids (water or juice, not soft drinks or other beverages with caffeine) to help reduce bloating, fluid retention, and other symptoms.
- Eat frequent, small meals. Leave no more than 3 hours between snacks, and avoid overeating.
- Vitamin B6, calcium, and magnesium are commonly used. Tryptophan, which is found in dairy products, may also be helpful.
- eat a low-salt diet and avoid simple sugars, caffeine, and alcohol.

Complementary and alternative treatments

- Cognitive behavioral therapy may be an alternative to antidepressants.
- Light therapy may decrease the need for antidepressant medications.
- Yoga
- Stress management
- Diet manipulation

THANK YOU

