Chapter-2 (m)

Women's Health

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- **Polycystic Ovary Syndrome**
- **Dysmenorrhea**
- **Premenstrual Syndrome**

Polycystic Ovary Syndrome:

Introduction.

- Polycystic ovarian syndrome (PCOS) is a complex endocrine disorder characterized by hyperandrogenism, menstrual abnormalities, polycystic ovaries, chronic anovulation, and decreased fertility. Formerly called Stein Leventhal syndrome, it affects 6-10% of reproductive age women worldwide. It is also associated with obesity, type 2 diabetes, and premature atherosclerosis, all of which may be indicative of an underlying metabolic disorder.

Etiopathogenesis.

- PCOS remains incompletely understood. It is marked by a dysregulation of enzymes involved in androgen biosynthesis and excessive androgen production, which is considered to be a central feature of this disorder. In addition, women with PCOS show insulin resistance and altered adipose tissue metabolism, which contribute to the development of both diabetes and obesity.
- The central morphologic abnormality of PCOS is numerous cystic follicles or follicle cysts that enlarge the ovaries. However, polycystic ovaries are detected in 20% to 30% of all women, so this finding is not

specific. In addition, due to an increase in free serum estrone levels, women with PCOS are at risk for endometrial hyperplasia and carcinoma.

Clinical manifestations.

- Obesity.
- Hyperinsulinemia.
- Ovarian cyst.
- Endocrine dysfunction.
- Irregular or missed period.
- Hyperandrogenism.
- Excessive body hair growth.
- Mood swing, fatigue, acne etc.

Pharmacological managements.

- Insulin sensitizing medications. Ex- metformin, pioglitazone etc.
- Androgen blocking medication. Ex- bicalutamide, nilutamide, leuprolide.
- Birth control pills to regulate menstrual cycle. ex- progesterone and norethindrone, levonorgestrel.
- Ovulation induction medications. Ex- clomiphene citrate.
- Others antibiotic and anti-acne drugs are also used.

Non-pharmacological managements.

- Any symptoms appear then consult with the gynaecologist, and change their life style (sleep and wake up pattern) as per the instruction.
- Diet pattern is very essential because it maintain the BMR and maintain the body weight.
- Behavioural changes like (anger, sadness, anxiety) also cause the hormonal balancing, so try to make happy and cheerful.
- Less consumption of tobacco, alcohol, and caffeine because it increases the production of androgens.
- Physical activity, yoga and meditation improve the body activity (Physically and mentally). It helps in reducing the stress and anger and maintain the hormonal level.

Dysmenorrhea.

Introduction.

- Dysmenorrhea term is defined as the menstruation with pain. Dysmenorrhea is pain, typically cramping in character and lower abdominal in location, occurring in the days just before and during menstrual flow. Dysmenorrhea can occur as a primary disorder in the absence of identifiable pelvic disease, or it may be secondary to an underlying pelvic disease such as endometriosis or leiomyomas

Etiopathogenesis.

- Primary dysmenorrhea is thought to be due to disordered prostaglandin production by the secretory endometrium. Prostaglandin F2α (PGF2α) stimulates myometrial contractions of the nonpregnant uterus, whereas prostaglandins of the E series tend to inhibit its contraction. It appears that patients with severe dysmenorrhea generally experience excessive PGF2α production rather than increased sensitivity to this prostaglandin. Unabated contractions of the myometrium result in uterine muscle ischemia, which stimulates the uterine pain fibres of the autonomic nervous system.
- The secondary causes of dysmenorrhea are endometriosis, a disorder in which extrauterine implants of ectopic endometrial tissue respond cyclically to estrogen and progesterone production (see Table 22–5). This is a common disorder, affecting 10–25% of women of reproductive age. The presenting symptoms of patients with endometriosis can range from pain and cramping during menstruation to adhesions with bowel obstruction in severe cases.

Clinical manifestations.

- Sweating.
- Weakness, Fatigue.
- Insomnia.
- Nausea, Vomiting, Diarrhoea.
- Back pain.
- Headache, migraine and tension headaches.
- Dizziness, and syncope.

- Including a sensation of bloating, weight gain, oedema of the hands and feet, breast tenderness, acne, anxiety, aggression, mood irritability, food cravings, and change in libido.

Pharmacological managements.

For reducing the pain and any infection drugs used as-

- NSAIDs. Ex- Ibuprofen, mefenamic acid, naproxen, celecoxib, nimesulide.
- Oral contraceptive. Ex- Norethindrone, levonorgestrel.

Non-pharmacological managements.

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Premenstrual Syndrome.

Introduction.

- Premenstrual syndrome (PMS) is the symptom of stress that appears before the onset of menstruation. It also called premenstrual stress syndrome, premenstrual stress or premenstrual tension. It is last for about 4 to 5 days prior to menstruation.

Etiopathogenesis.

- It is cause by any hormonal imbalance in the body mainly progesterone and estrogen. It may be happened due to any stress, emotional behaviour and nutrient deficiency etc.

- The neurotransmitter that is most implicated in the manifestations of PMS is serotonin, although there is evidence to implicate beta-endorphin, gamma-aminobutyric acid (GABA), and the autonomic nervous system.
- It is cause by the salt and water retention by estrogen.

Clinical manifestations.

- Mood swings.
- Irritability, anger, anxiety.
- Less interested in sex wanting to be alone.
- Join pain, muscle pain.
- Emotional instability.
- Headache, indecision, insomnia.
- Constipation, and gastric abnormality.
- Abdominal cramping.
- Bloating (abdominal swelling).

Pharmacological managements.

- Antidepressants. Ex- Escitalopram, citalopram, fluoxetine.
- Diuretics. Ex- Furosemide, torsemide, spironolactone.
- Oral contraceptives. Ex- Norethindrone, levonorgestrel.
- NSAIDs. Ex- Ibuprofen, mefenamic acid, naproxen, celecoxib, nimesulide.

Non-pharmacological managements.

- Any symptoms appear then consult with the gynaecologist, and change their life style (sleep and wake up pattern) as per the instruction.
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