

Review on Polycystic Ovarian Disease/Syndrome (PCOD/PCOS)

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Abstract: *PCOD or PCOS is a reproductive and metabolic disorder concerned with the ovaries. An ovary is an active organ that changes its form, Appearance, and shape according to its hormonal ambiance. PCOD or PCOS is a condition in which ovary of women of childbearing age is Enlarged and starts producing an excessive amount of male hormones (androgens) and is the main cause of infertility, diabetes, irregular Menstrual periods, and hirsutism. No exact cause of the disease has been found yet but the change in lifestyle, change in dietary needs, lack Of exercise, and the most important of all, i.e. stress level induces the disease. There are medicines, which can induce an artificial menstrual Cycle and regulate the level of hormones and ultimately treat the three signs of PCOS i.e. Acne, Hirsutism, and Obesity*

Keywords: PCOD, PCOS, , hirsutism, pregnancy, management, diagnosis, treatment

I. INTRODUCTION

Polycystic ovary syndrome (PCOS/PCOD) is a problem in which a woman's hormones are out of balance. It can cause problems with their periods and make it difficult to get pregnant. If it is not treated, over time it can lead to serious health problems, such as Diabetes and Heart disease. Most women with PCOS grow many small cysts on their ovaries. That is why it is called polycystic ovary syndrome. The cysts are not harmful but lead to hormone imbalances. Early diagnosis and treatment can help control the symptoms and prevent long term problems.[1]

The numerous ovarian cysts that are a common ultrasound finding and indicate immature follicles are how the disease got its name. The follicles have evolved from primordial follicles, but because of disrupted ovarian function, the development has halted at an early antral stage. On ultrasound imaging, the follicles may be positioned along the ovarian periphery and look as a "string of pearls. In USG "[2]

II. SIGN AND SYMPTOMS OF PCOD /PCOS

The most typical PCOD symptoms and indicators are the following :

Sign of PCOD:

- Abnormal menstrual cycle (irregular periods, amenorrhoea, oligomenorrhoea)
- Hyperandrogenism and hirsutism (extra hairs on face and body parts)
- Acne; oily skin
- Weight gain and Central Obesity
- Androgenic alopecia (Hair loss and hair thinning)
- Acanthosis nigricans (patches of black skin on the back of the neck and other places)
- Obstacles to getting pregnant
- Insulin resistance
- Anxiety, Depression, Mood swings
- Sleep apnea
- Cystic Ovaries (not every PCOS patient has cystic ovaries.) [4]

Sign of PCOS:

- U.S. Departmental of health and human service,2018Irregular or absent periods

- Excess androgen hormones, which can lead to
- Acne
- Hirsutism (excessive hair growth on the face, body, or chest)
- Male pattern baldness
- Deepening of the voice
- Weight gain
- Infertility
- An increased risk of type 2 diabetes, heart disease, and endometrial cancer PCOD symptoms can get worse due to weight gain or insulin resistance. Additionally, it may result in heart disease and diabetes [60]

Causes of PCOD or PCOS:

- Genetics and heredity
- Unbalanced diet (processed foods with low fiber, high carbose and fat content)
- Adulterated foods (presence of pesticides, chemicals, and hormones like oxytocin)
- Lack of physical activity
- Stress
- Obesity and insulin resistance
- Disturbed sleep[5]

III. PCOS AND PREGNANCY

Women with PCOS are at higher risk for certain problems or complication during pregnancy. In addition, infants born to mother with PCOS are at higher risk of spending time in the Neonatal intensive care unit or dying before, during, or right after birth. Complications of Pregnancy associated with PCOS, such as preeclampsia, could be a reason for these risks.[8]

IV. CAUSE OF HORMONAL IMBALANCE IN PCOD WOMEN

The exact etiology is still unclear. Many factors are Considered to play a role in its circumstances.

- Genetics and heredity
- Unbalanced diet (processed foods with low fiber, high Carbose and fat content)
- Adulterated foods (presence of pesticides, chemicals, and Hormones like oxytocin)
- Lack of physical activity
- Stress , disturb sleep.
- Obesity and insulin resistance[9]

Diagnosis:

- Oligomenorrhoea (irregular or prolonged menstrual cycles)
- Hyperandrogenism (excessive production of androgens)
- Anovulation
- Infertility
- Hirsutism, acne, Acanthosis nigricans. Investigation
- USG
- Hormonal Study
- Laproscopy

Treatment:

- Modification in dietary routine by having a low-Carbohydrate diet
- Regular physical activity or regular exercise

- Modification in behavior
- Stress -free lifestyle.
- Reduce the intake of fast food
- Reduce intake of processed food
- Reduce the intake of alcoholic beverages
- Regular check on vitamin-D level [13,]

Recent medicine used in Recent medicines used in regulating PCOS:

Certain medicines are used globally to regulate PCOS and The first line of pills that are used to prevent hirsutism, acne, And irregular menstrual periods are oral contraceptives. Oral Contraceptives are the pills, which are appropriately Composed of hormones and they start an artificial menstrual Cycle in women so as she can get a withdrawal bleeding. Contraceptive Pills come in a pack of 21 active tablets, and Some then have seven days of inactive tablets as a reminder To have a seven-day break from the medication. These pills Also possess good treatment for excess hair and acne Because they contain a small dose of male hormone Blockers. These pills result in very low levels of free Testosterone in the body. While having these pills, one Cannot get pregnant. In the market, there are many brands of The pills available and these are:

- Diane-35 (contain a small amount of synthetic Progestin, CPA)
- Yasmin (contain a small amount of synthetic Progestin)
- Marvelon
- Femoden-ED
- Microgynon

Some drugs that contain CPA Cyproterone acetate, are Enormously useful drugs for the management of severe Androgen-excess disorders. CPA is an androgen-blocker—Which means it suppresses the ovarian production of Testosterone—and it is a progestin, so it protects the uterus Against cancer and lightens menstrual periods. It is usually Given with estrogens.[10]

V. CONCLUSION

PCOD or PCOS is a reproductive disorder in which Women's ovary gets enlarged and starts producing an Excessive amount of male hormones (androgens) and is the Main cause of infertility, diabetes, irregularity in menstrual Periods, and hirsutism. The pathophysiologic defect is not Known yet, but certain vital features are known, which include resistance towards insulin, an increase in the level of Androgen production, and altered gonadotropin dynamics. It Is also associated with an imbalance in glucose and insulin Dysfunction, which leads to obesity, diabetes, a rise in Cholesterol level and an increase in blood pressure.

Stress is One of the primary causes of PCOS, which can ultimately Lead to hypertension, diabetes mellitus, increased risk of Uterine cancer, and even cardiovascular diseases. Endocrine features related to the diagnosis of PCOS or PCOD include elevated levels of certain hormones like Androgens, luteinizing hormone, prolactin, and estrogen. Diagnostic criteria of the disease are having two out of the Following symptoms: Hyperandrogenism, Oligomenorrhoea, Or Polycystic appearance of the ovaries. Infertility, Menstrual disturbances, and acne can be prevented by taking Oral contraceptives, insulin lowering drugs, progestin Therapy, and weight loss.

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