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A Review on Treatment with Herbs for Polycystic Ovaries

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Abstract

Polycystic ovarian syndrome (PCOS) is one of the most prevalent endocrine diseases affecting women of reproductive age, with a worldwide incidence of 5-10%. PCOS is distinguished by hyperandrogenism, irregular menstrual periods, polycystic ovaries, insulin resistance, and obesity, particularly of the abdominal kind. PCOS is a multigenic complicated condition that causes metabolic and gynaecologic dysfunctions in women of reproductive age. The family clustering of PCOS women shows that genetics is involved in the development of this condition. PCOS is currently thought to be a polygenic characteristic caused by the combination of numerous vulnerable and protective genetic variations, as well as the effect of environmental variables. The paraoxonase 1 (PONI) gene encodes an antioxidant enzyme that inhibits LDL oxidation and hence atherosclerosis. In our PCOS patients, serum paraoxonase levels were considerably lower.

Keywords: - *Herbal treatment, Pathophisiology, Polycystic ovarian syndrome (PCOS), Hyperandrogenism, Ovulatory dysfunction*

INTRODUCTION[1]

It is undeniable that infertility is one of today's major medical concerns, and its prevalence has increased since 1955, with 10%-15% of couples affected. Polycystic ovarian syndrome is one cause of infertility (PCOS). The most frequent endocrine condition in premenopausal women is PCOS. It was first described in 1935 by Stein and Leventhal, who

discovered a link between polycystic ovaries and amenorrhea, hirsutism, and obesity. The researchers described bilaterally enlarged ovaries with a thick and white capsule. This syndrome is distinguished by hyperandrogenism, ovulatory dysfunction, irregular menstrual cycles, sex hormone imbalance, and polycystic ovarian morphology. PCOS is also connected with metabolic disorders such as insulin resistance and obesity.

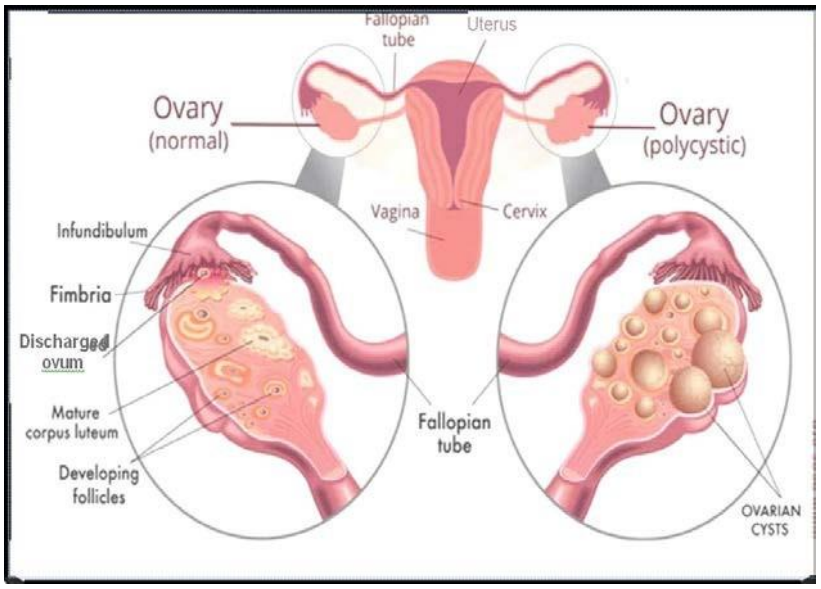
PCOS is predisposed by weight increase and fat buildup. The primary line of treatment for PCOS is lifestyle adjustment, including increased physical activity. The goal of this study is to see how exercise intensity affects weight changes, rostenedione levels, and free testosterone levels in female rats with estradiol valerate-induced PCOS.

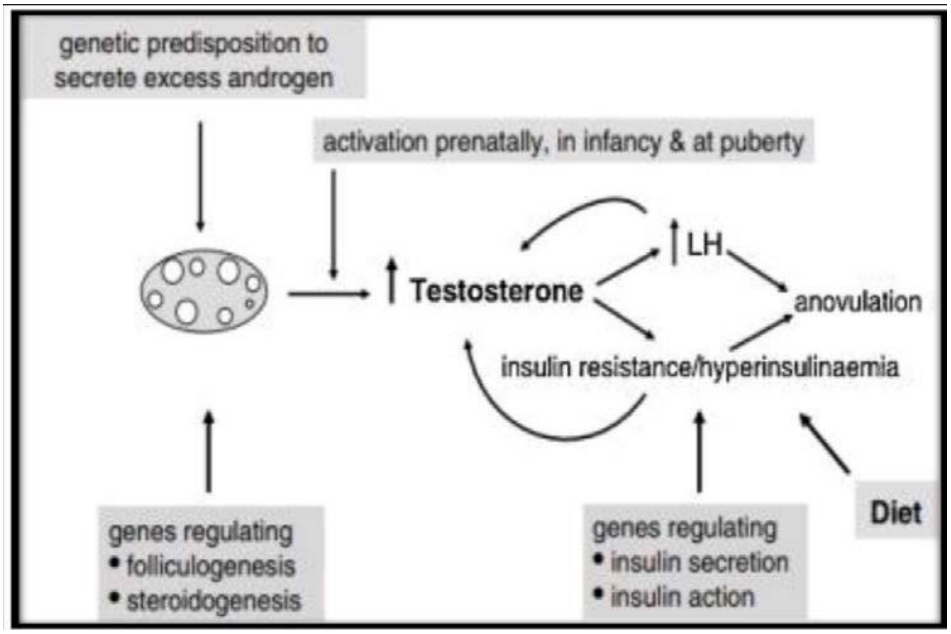
On the other hand, the importance of exercise and mental health in individuals and society is obvious and inextricably linked to physical and spiritual health. Women's exercise is important since it meets many of their bodies' physiological demands. Physical activity and exercise cause various hormone levels to rise or fall in comparison to their resting levels. Physical activity lowers the synthesis of oestrogen and steroid hormones. In women with PCOS, lifestyle intervention studies that combine increased physical activity with reduced caloric intake show an improvement in ovulatory function, circulating androgen levels, inflammatory pattern, and insulin sensitivity. Furthermore, several single- nucleotide polymorphisms linked to obesity lead to higher body mass index (BMI) in PCOS, lending credence to the idea that its phenotypes are the result of a polygenic process. MetS is a complicated illness defined by a number of metabolic risk factors as well as a variety of symptoms such as abdominal obesity, dyslipidemia, hypertension, IR (with or without glucose tolerance), pre-inflammatory condition, and hypercoagulable state. Because this condition can lead to cardiovascular disease (CVD) and diabetes, understanding its underlying causes and preventions is critical. MetS prevalence varies from 7 to 43% among women suffering with PCOS over the world due to variances in diagnostic markers, race, and geographical factors. IR is a fundamental component of PCOS and MetS pathogenesis.

IR is induced due to the oxidative stress-related mechanisms. Diet has been recognized as one of the modifiable factors of the lifestyle with a significant impact on oxidative stress and IR. Improper diet and

sedentary lifestyle can undoubtedly cause and intensify the PCOS symptoms by aggravation of IR and serum insulin level along with increasing obesity. Previous studies have addressed the role of some micronutrients in IR and its improvement.

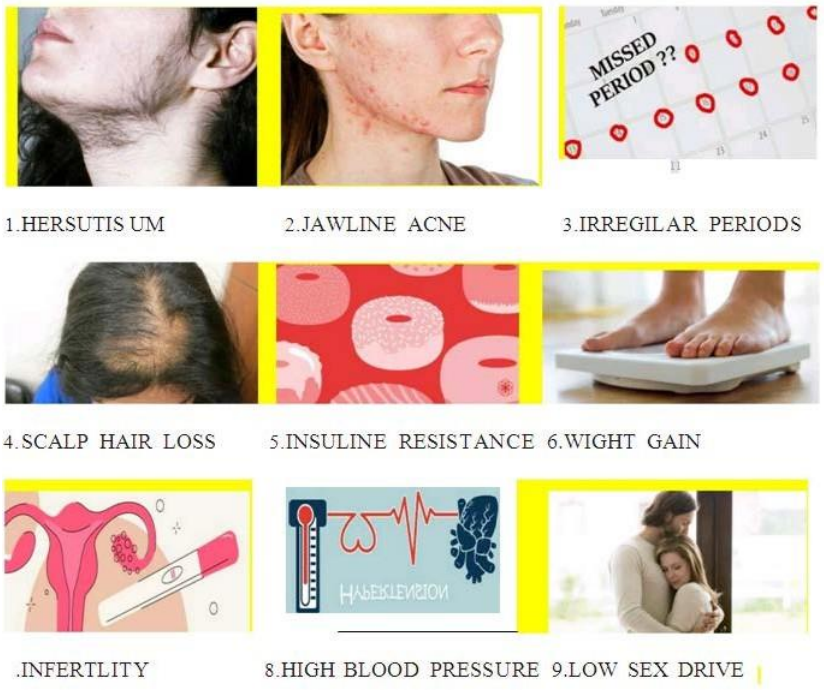
PATHOPHISIOLOGY OF PCOS[2]





SIGN & SYMPTOMS [3]

Polycystic ovaries syndrome-PCOS symptoms:



Polycystic ovary syndrome (PCOS) is a collection of symptoms arising from an excess of androgens. Menstrual cycle - speci fic symptoms of PCOS include amenorrhea, oligomenorrhea, or menorrhagia, with the most common feature being irregularly long menstrual periods. The link between PCOS, menstrual period length, and ovarian cancer remains unclear; several studies have provided evidence both supporting and refuting an association but few large population studies have investigated this relationship.

CAUSES[4]

Genetics: If a close family member, such as a sister or mother, has the condition, you have an increased, but not guaranteed, chance of developing PCOS.37,38 Even without a family history of PCOS, there are other risk factors that can lead to its development.

Diet: Diet additionally, diet has been found to be a contributing factor for PCOS. Fats and proteins from one's diet can form advanced glycation end products (AGEs) when exposed to sugar in the bloodstream.39 These compounds are known to contribute to increased bodily stress and inflammation, which have been

linked to diabetes and cardiovascular disease.40 PCOS patients already have an increased likelihood for metabolic syndrome, cardiovascular issues, and diabetes. Thus, it's best to limit exposure to AGEs. Animal-derived foods that are high in fat and protein are generally AGE-rich and prone to more AGE formation during cooking. In contrast, foods that are low on the glycemic index-such as vegetables, fruits, whole grains, and milk-contain relatively few AGEs, even after cooking

Lifestyle: Everyday habits greatly affect the development and severity of PCOS.

- Obesity is widely recognized as aggravating PCOS, so managing a healthy weight, especially abdominal circumference, is recommended.

- Exercise helps to reduce many PCOS symptoms, such as depression, inflammation, and excess weight. Aim to incorporate exercise into your lifestyle.41 The Centers for Disease Control and Prevention (CDC) recommends 150 minutes (2 hours and 30 minutes) of moderate-intensity exercise per week or 75 minutes of high-intensity exercise per week and incorporating strength training 2 days per week.42

- In addition to exercise, increase daily activity by taking the stairs, going on short walks, and stretching throughout the day. No matter the movement, stay consistent and choose an enjoyable activity.

- Women may want to limit inflammatory foods-such as dairy products , foods with gluten, and foods high in glycemic load, such as potatoes, white bread, and sugary desserts-as much as possible.43 But if those foods do not cause bodily aggravation, then there is no need to eliminate them completely.

Environmental exposure risks: Environmental exposures to endocrine-disrupting chemicals may lead to female reproductive health issues, including PCOS. Research shows that endocrine-disrupting chemicals may pose the greatest risk during prenatal and early postnatal development, when organ systems are everyday products we use, including some plastic bottles and containers, liners of metal food cans, detergents, flame retardants, food, toys, cosmetics, and pesticides. Limiting personal exposure to

endocrine-disrupting chemicals may benefit reproductive.

DIAGNOSIS[5]

Diagnosis of Polycystic Ovary Syndrome (PCOS) and its related phenotypic features including hirsutism and oligomenorrhea can affect a woman's social and emotional well- being and physical perception of herself thus causing great distress and leading to a diminished quality of life . In recent decades, obesity has reached epidemic proportions globally. Raised body-mass index (BMI) is a known risk factor for diabetes mellitus, coronary artery disease and strokes. Reproductive problems such as menstrual irregularity and infertility are more prevalent in overweight and obese women. Obesity is also closely associated with PCOS, which afects 6-12% of women of reproductive age. Tesyndrome is a heterogenous condition characterized by three canonical features; oligomenorrhea/anovulation; hyper androgenism as demonstrated by elevated serum androgens and/or hirsutism; and polycystic ovarian morphology characterized by abnormally high antral follicle counts (AFC) or increased ovarian volume. Te presence of two of these three features is sufficient for a diagnosis of PCOS according to the Rotterdam 2003 criteria.

The relationship between high BMI and individual phenotypic features of the Rotterdam criteria that characterize PCOS remains unclear. For example, a meta-analysis among women with PCOS indicates that hirsutism, as measured by modified Ferriman-Gallwey score (rnFG), was raised only comparing obese versus overweight women, but not when comparing obese versus normal weight women [13]. Efects of obesity on features such as menstrual cycle length and AFC remain unclear, especially in healthy women. We hypothesize that increased body weight affects these individual phenotypic features, and having PCOS may exacerbate them.

Blood tests: Your blood may be tested for high cholesterol, blood sugar level (Insulin resistance) and for changes in LH (luteinising hormone) or (FSH follicle stimulating hormone) 6

Transvaginal ultrasound: A long slender probe is inserted into the vagina to determine the presence of ovarian cysts or enlarged ovaries and also to examine the reproductive organs for any irregularities If you would prefer not to have a vaginal scan, your doctor may conduct an ultrasound of your abdomen-done externally while you have a full bladder.

TREATMENT [7]

SYMPTOMS	TREATMENTS
Obesity, weight gain	Weight loss options include: • changes to diet • exercise • medications, • surgery, 1.e. gastric bypass,lap-band
Hirsutism (hairiness)	Medications, 1.e. in sulin lowering agents, such as metforrnin, oral contraceptive pill.anti androgens • cosmetic treatments, 1.e . waxmg , bleaching, laser,electrolysis • weight loss
Acne	Topical creams • medications, 1.e . oral contraceptive pill, insulin lowerin g agents, such as metformin, antiandrogen
Insulin resistance Diabetes	weight loss • changes to diet • exercise • medications, 1.e . insulin lowering agents, such as metforrnin
infertility caused by irregular periods and ovulation	weight loss • medications , i.e. clomiphene citrate ,"cinsulin Lowering agents, such as metforrnin, oral contraceptive pill

Drug Used for PCOS (Polycystic Ovary Syndrome)

Name	Brand name	Ingredients	Images of products
Herbalance	Ozia	Aloevera Redraspberry Gokhru Ashoka Shatavri Chasterberry	
MYRAA	Gynoveda	Kanchnar Ashwagndha Meethiseeds Neem Karela Shilajit	
VARMAA	Gynoveda	Shatavri Aleovera Majstha Dasmal Haritaki	
PCOS PROTEIN BALANCE	My daily products	Vitamins Biotin Folate Calcium Zinc Iron Chromium	
PCOS TEA	Andme products	Ashoka Rose Cardamom Cinnamon Almond Lemon Clove Lodhra Shatavri	

PCOS AYURVEDIC	Kamree	Fenugreek Ulatkambal Yashtimadhu Flaxseeds Shatavri Ashwagndha Amla	
PCOS BALANCE CAPSULES	Body wise	Shatavri Ashoka Lodhra Kumari Triphala Majistha Chandan Yashtimadhu Gugggl Synth	
COLLAGEN BOOSTER	Andme products	Strawberries fruit powder Vitamins Lemon fruit powder Beetroot powder Herb extract (golukola, Amla, green tea, licorice, aleovera, tumeric , Ginkgo, ginseng)	

CONCLUSION

A lack of solid data may confound women with PCOS' perceptions of the efficacy of lifestyle therapies. Clinical studies studying adaptable and practical lifestyle treatments for women in the community with PCOS may strengthen the recommendations in clinical practise guidelines.

This study, by offering a picture of eating habits in overweight and obese teenage girls with PCOS, can aid in the creation of appropriate interventions to modify these girls' food habits, regulate the symptoms and consequences of PCOS, and, eventually, enhance their reproductive health.

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