

**PCOS AN AYURVEDIC REVIEW****Vaidya Sushma Shankar<sup>1</sup>, Vaidya Pratyush Kumar<sup>2</sup> and Vaidya Priyanka Sharma<sup>\*3</sup>**

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**ABSTRACT**

In the current world of advanced industrialization and technology humans are getting adapted to very comfortable and sedentary living standards. Changing life style, diet pattern, increase in stress and pollution are resulting in many lifestyle disorders. PCOS is one amongst them. It is mostly seen in young women during their reproductive age. It is one of the most common causes for infertility and menstrual disorders. Poly-cystic Ovarian Syndrome (PCOS) is a common endocrinopathy. It is characterized by polycystic ovaries, chronic anovulation and hyperandrogenism leading to symptoms of menstrual irregularity, infertility and hirsutism. In Ayurveda no direct reference of PCOS is available but it may be correlated with *Artavakshaya* or with *Pushpaghni Jataharani*. Ayurveda advocates

that sedentary lifestyle, overweight and increased stress lead to *Kapha-vridhhi* and *medo-vridhhi*, which in turn cause *srotavrodha* or blocking of *Vata* and *Pitta* in the minute body channels of the body, thereby disturbing the normal physiology. The hypothalamo-pituitary-ovarian axis gets disturbed resulting in the formation of small cysts in spite of formation of a mature ovum & finally it leads to amenorrhoea. This study was carried out to study the concept of PCOS with Ayurvedic perspective and to describe its prevention and management through Ayurveda.

**KEYWORDS:** PCOS, *artav-kshaya*, *medo-vridhhi*, *srotavarodha*.

## INTRODUCTION

Poly-cystic Ovarian Syndrome (PCOS) is, nowadays, one of the most frequent endocrine diseases in women of reproductive age with a prevalence of 9.13% in Indian population. It is also known as Stein-Leventhal Syndrome, as first described in 1935 by American gynecologists Irving F Stein, Sr. and Michael L. Leventhal. Some other synonyms of PCOS are Functional Ovarian Hyperandrogenism, Ovarian Hyperthecosis, and Sclerocystic Ovary Syndrome etc. The definition of the syndrome has been much debated. At a joint ESHRE/ASRM (European society for human reproduction and embryology/American society for reproductive medicine) consensus meeting a refined definition of the PCOS was agreed namely: the presence of two out of the following three criteria: 1. Oligo or anovulation 2. Hyperandrogenism (clinical or biochemical) 3. Poly-cystic ovaries. So we can say that Poly-cystic ovarian syndrome is not only a disease with polycysts in the ovaries. Rather, it is a heterogeneous collection of signs and symptoms which are present only mildly in some, while as severe disturbances of reproductive, endocrine and metabolic functions in others. It is characterize by:

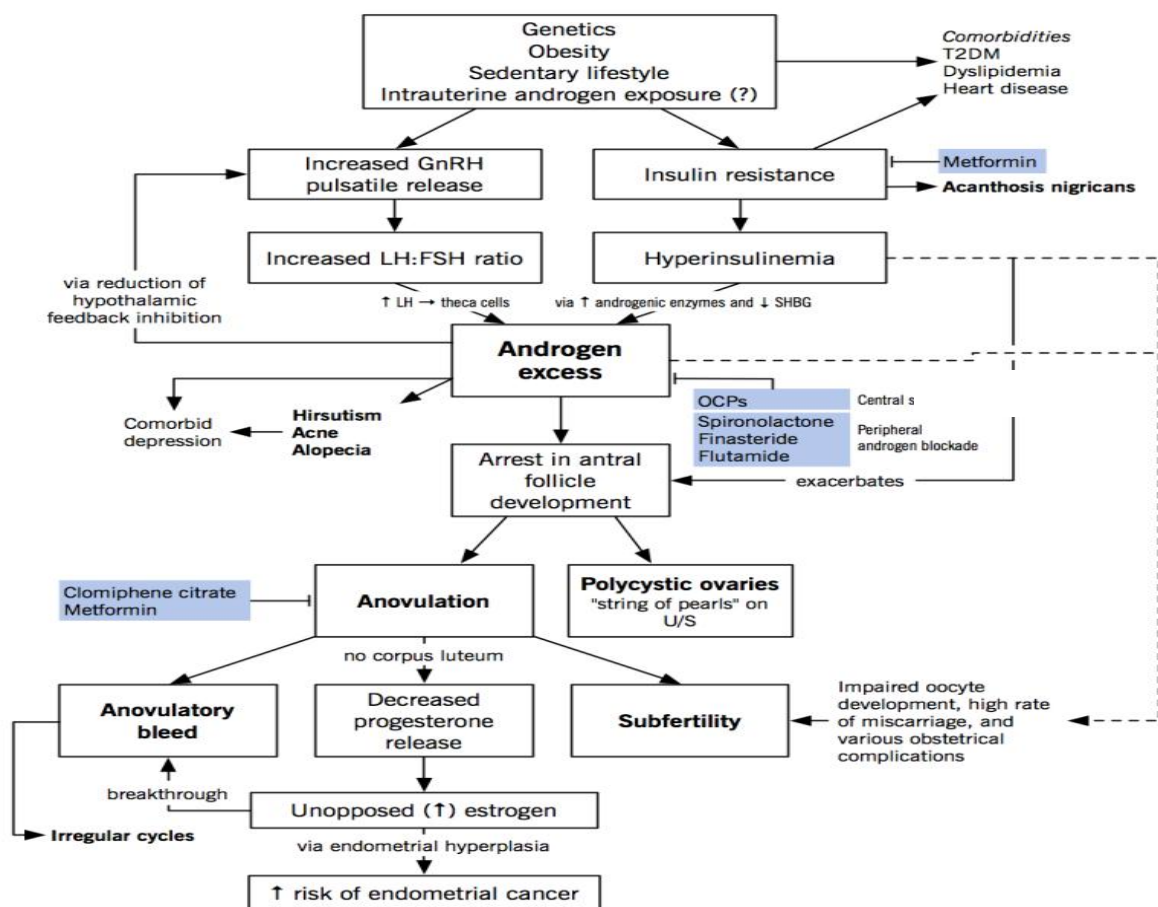
1. Hyperandrogenism which is presented as obesity, hirsutism, acne and hair loss on scalp.
2. Anovulation which may be presented as irregular menstrual cycle, oligomenorrhoea, secondary amenorrhoea and DUB (because of hyper-proliferative and hyper-plastic endometrium).
3. Hyperinsulinemic insulin resistance presented by BMI > 25 kg/m<sup>2</sup>, acanthosis nigricans and waist to hip ratio > 0.35.

## Investigations

1. USG: ovaries enlarged (>10cm<sup>3</sup>) Increased number(>12) of peripheral arranged cysts(2-9mm)
2. Serum values: LH level elevated and/or LH: FSH >2:1 Estradiol and estrone level raised.
3. SHBG level reduced
4. Hyperandrogenism
5. Serum testosterone raised(>150mg/dl) and
6. DHEA-S marginally elevated
7. Insulin resistance(IR)  
Raised fasting insulin > 25 mcg IU /ml and  
Fasting glucose/insulin ratio < 4.5 suggest IR (50%).  
Laparoscopy: bilateral polycystic ovaries

**Patho-physiology of PCOS**

In PCOS, the woman gets negatively affected by altered diet, lifestyle and exposure to certain environmental toxins. The characteristic neuro-endocrine feature of PCOS includes increased serum concentration of luteinizing hormone (LH), LH/FSH ratio and increase in the amplitude, and frequency of LH secretion. This hormonal imbalance affects follicular growth during the ovarian cycle causing the affected follicle to remain in the ovary. The retained follicle forms into a cyst & with each ovarian cycle a new cyst is formed leading to multiple ovarian cysts. Women with PCOS tend to be insulin resistant because of increased weight. To overcome this resistance, the body secretes more insulin, thus causing a hyper-insulinemic state. These are all predictive of type 2 diabetes. Increased circulating levels of testosterone are also noted because high levels of insulin decrease circulating levels of sex-hormone-binding-globulin (SHBG). This in turn leads to increasing levels of free testosterone and a worsening of the signs and symptoms of hyperandrogenism. Due to the presence of increased androgen in the ovary, the follicle undergoing maturation in the ovarian cycle is affected causing anovulation of the particular follicle. Pathophysiology of PCOS can be represented by the following chart:



Ayurveda considers involvement of four basic etiological factors i.e. unhealthy lifestyle, menstrual disorders, genetic defects and cryptogenic factors in the establishment of female genital disorders (*yoni vyapad*). PCOS can be correlated with *Artava-kshaya* or with *Pushpaghni jataharani*. The symptoms of *Artava-kshaya* is *Yathochita-kala-adarshana* means *Apravrutti of Artava* in its *Yogya Kala* (it may be delayed or absent), *Artava* is *Alpa in pramana* (scanty bleeding) and *Yoni-vedana*. The symptoms of *Pushpaghni Jataharani* is *Vyarthapushpa-darshana* (anovular menstruation), *Sthula-Ganda-pradesha* (cheeks are corpulent) and *Lomayukta* (hirsutism). According to Ayurveda, *Artava-kshaya* is a disorder involving *Vata* and *Kapha doshas*, *Medas*, *Ambu/Rasa*, *Shukra/ArtavaDhatu* and *Rasa, Rakta, Artava-Vaha Srotas*. Poly-cystic Ovarian Syndrome can also be described with same involvement of *Dosha, Dhatu* and *Upadhatu*. *Kapha* predominance manifests as increased weight, subfertility, hirsutium, diabetic tendencies and feel of coldness. *Pitta* predominance manifests as hair loss, acne, menses with burning pains, clots and heart problems. *Vata* predominance manifests with painful menses, scanty or less menstrual blood and severe menstrual irregularity. The pathology is an obstruction (*sanga*) in the pelvic cavity (*Apana-Kshetra*) causing disorders in the flow of *Vata*. This in turn leads to an accumulation of *Kapha* and *Pitta*.

Another view may be that PCOS is a *Kaphaj* disorder alongwith the involvement of *Pitta* and *Vata*. *Jatharagni* plays an important role in the pathophysiology of PCOS. The causes of PCOS can be explained as eating excessive sweets and *Kaphavardhak aahara* ( food causing weight gain) alongwith *avyayama* (sedentary lifestyle), leads to *kapha-dosh vriddhi* which vitiates the *Agni* & finally leads to *Mandagni*. Due to the vitiation of *Kaphadosha*, first it affects the *Jatharagni* which leads to formation of *Ama*. *Artava-dhatu* gets affected by the heavy, sticky qualities of *Kapha* and *Ama*. An area of blockage gets created by these vitiated *kapha* and *aama*. Thus *Apanavayu* in *Artavavaha Srotas* becomes stagnant – *Sanga*, due to excessive *Kapha* and *Ama* accumulation, blocking the channels and thereby impeding the flow of *Vata*. The accumulated *Kapha* may get expressed in the form of the cysts in the ovary. Due to *Vata* being blocked, it also affects the *Pittadosha*. *Pitta* aggravation at the level of *Bhrajakapitta* and *Ranjakapitta* manifests as acne and increased body hair.

### Management of PCOS

Currently the standard care treatment for PCOS in modern science ranges from lifestyle modification to pharmacological interventions. Lifestyle modifications are associated with

diet, exercise and weight loss. Pharmacological interventions include antiandrogens (Spironolactone, Flutamide), insulin lowering agents (Metformin and Thiazolidinediones), and estrogen-progestin combination (Oral contraceptives). Such treatment is associated with substantial cost and may cause various side effects, such as irregular menstruation, gastrointestinal symptoms, weight gain and increased insulin resistance. On other approach ayurvedic principle can be followed which advocates *swasthyasya swasthaya rakshanam* i.e. prevention and promotion of health. In the present era, everyone should follow the principles of *swasthaya-raksan* like *dincharya*, *ritucharya*, *sadvritta*, *hithaahara*, *samyaka nidra*, *aachar rasayana* and *yoga* for the prevention of such life style related disorders like PCOS. Lifestyle modification including regular exercise is useful in the management of *medovridhhi* which plays a crucial role in the development and progression of PCOS. Following dietary modifications may be recommended as per ayurveda for PCOS:

	<b>Pathya (Do's)</b>	<b>Apathya (Don'ts)</b>
cereals	old <i>shali</i> rice, barley, <i>samvaka</i> , <i>kodrava</i> , <i>rye</i> , wheat	Rice, freshly harvested grains
Pulses	green gram ( <i>mudga</i> ), lentil ( <i>masura</i> ), <i>kulattha</i> , pigeon pea ( <i>arahara</i> ), chickpea ( <i>chana</i> )	black gram ( <i>urada</i> )
fruits & vegetables	<i>tanduliyaka</i> , <i>patola</i> , bitter gourd (karavellaka), <i>shigru</i> , <i>amalaki</i> , <i>haridra</i> , <i>kapittha</i> , black pepper, <i>guduci</i> , <i>jivanti</i> , grapes, bittergourd ( <i>lauki</i> ), pumpkin ( <i>kaddu</i> ), leaves of drumstick, curry leaves, <i>methi</i> leaves, <i>pudina</i> , <i>tulsi</i> , onion ( <i>payaj</i> ), garlic ( <i>lahsuna</i> ) coriander ( <i>dhania</i> ), , cabbage ( <i>pata gobi</i> ) cucumber ( <i>kheera</i> ), <i>gheeya</i> (tori), <i>parwal</i> , cauliflower ( <i>full gobi</i> ), beans, snakeguard, tomato ( <i>tamatar</i> ), <i>karela</i> , <i>tinda</i> , <i>kundaru</i> , <i>shimla mircha</i> etc.	Sweet fruits and spoiled fruits and vegetables.
Others	light food, honey, betel nut, rock salt	milk, curd, butter milk, clarified butter, oil, jaggery, alcohol, sugarcane products, betel, eating before digestion of previous food, incompatible food.
Life style	Yoga ,walking, playing, physical exercise, Proper sleep and awakening.	Day sleeping, sudation suppression of natural urges smoking, stress, anxiety.
<i>Yoga, pranayam and dhyaan</i>	<i>Pawanmuktaasana</i> , <i>suryanamskar</i> , <i>kapalbhati</i> , <i>mandukasana</i> , <i>anulomaviloma</i> , <i>omkar dhyana</i> ect.	<i>Rajasik</i> and <i>tamshik aahara</i> .

Before treating a disease it has been advised in Ayurveda to go for *Nidanparivarjana*. I.e. avoiding the causes which are at the root of the disease. As *kaphadosha* and *dushtamedas* are key elements involved in PCOS, therefore weight reduction in obese patients is the initial recommendation. It reduces insulin, SHBG and androgen levels and may restore ovulation. Secondly management should be focussed on *Amapachan* and *Agnideepana* at *jatharagni* and *dhatwagni* level which alleviates *srotavarodha* and ultimately regularises the *apanavata*. Acharya Sushrut has mentioned *agneyadravyas* having properties like *deepana*, *pachana*, *chedana*, *lekhana*, *medohara* are able to pacify *Kapha & Vata dosha*. These can be used to treat PCOs as well. Many plants like *Asparagus Racemosus*, *Grifola frondosa*, *Lepidium meyenii*, *Tinospora Cordifolia*, etc., have also been highly esteemed sources which can be the next line of management of PCOS. *Samshodhana Karma* (*Vaman*, *Virechana* and *basti*) can also be prescribed depending upon the *deha-prakriti* and *vyadhi-bala* of the suffering female. *Panchkarmas* help in *StrotoShudhi* (cleaning or removing obstructions in the channels) and *dosha-samyata*. *Shamana-yogas* having properties of *Aampachan*, *srotoshodhan* and *vata-kapha-shaman* are also advocated in PCOS. Use of various *lekhan-dravyas* like *takra*, *vyoshadya-sattu* as described by *acharya Charak* can also be given. Along with the advantages of regularizing the ovarian dysfunctions, these also have hypoglycemic and anti-obesity effect.

## CONCLUSION

Polycystic ovary syndrome (PCOS) is a highly prevalent endocrine-metabolic disorder characterised by polycystic ovaries, chronic anovulation and hyperandrogenism leading to symptoms of menstrual irregularity, infertility and hirsutism. Insulin resistance, obesity and elevated levels of male hormones (androgens) are associated with PCOS. Ayurveda aims at providing comprehensive care by correcting the *ama-dosha* (insulin levels), achieving *koshta shuddhi* and *tridosha-shaman*. By achieving all these goals, the menstruation gets regularized and fertility is restored.

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