

Polycystic Ovarian Syndrome: management with Ayurvedic prospective

Vd. Snehal Gharapankar¹, Vd. Amit Shinde²

*PG Scholar, Dept of Prasutitantra & Striroga, SST's Ayurved Medical College, Sangamner
Associate Professor, Dept of Prasutitantra & Striroga, SST's Ayurved Medical College, Sangamner*

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ABSTRACT:

One of the most dangerous medical conditions that can affect a pregnant woman, especially a young one, is polycystic ovarian syndrome. It is connected to irregular menstruation, miscarriages, and abnormal body mass index. The main causes of the daily rise in disease incidence are an unhealthy lifestyle, poor diet, depression, and other factors. If left untreated, this can result in repeated abortions or miscarriages as well as physical and mental disorders in the patient. One of those conditions, PCOD, usually affects women in their second or third decade of life. It is important to know thoroughly about this disease as modern science has no root cause cure to treat it even the treatment of modern science implicated leads to severe side effects and dependence of the drugs.

In Ayurveda, PCOD is diagnosed based on how it manifests itself in various ways, such as hetu, lakshana, dosha-dushya, samprapti, etc. The associated features of PCOS are similar to vandhya yonivyapada, artava-vahastrotas-viddha lakshana, nastartava, and ksheena-artava, as described by Acharya Sushruta and mentioned by Acharya Kashyap, as well as vikruta jatharini and pushpaghni jatharini and astartava.

Keywords – PCOS, Ayurved, Artava

I. INTRODUCTION:

Women's reproductive age endocrine system is associated with the condition known as polycystic ovarian syndrome (PCOS). Women with enlarged ovaries and PCOS who have fluid deposited in it. Infertility, obesity, acne, hair growth, and irregular menstruation cycles are among the other clinical traits of PCOS. In addition, dyspareunia, lower abdominal pain, and abdominal expansion are associated with the disorder. Hormonal system abnormalities associated with pathological diseases impact follicular growth during the ovarian cycle, and these follicles continue to be out of balance with the ovary. The illness linked to anterior disease's

pituitary gland's secretion of lutenizing hormone (LH) and follicle stimulating hormone (FSH). The use of hormonal therapy and surgical procedure seems to be part of modern treatment approaches.

The ayurveda described disease under the heading Raktagulma. Vata vitiated due to Nidansevan then aggravated & enters into Garbhashaya leads obstruction in Artavvaha Srotas. The vitiated Vata and Dushti Rakta accumulated gradually and develop as Pinda around the wall of uterus; Raktagulma, Pitta, Kapha, Medas, Ambhuvahasrotas & Artava Dhatu are also associated with PCOS. Ayurveda described that aggravation of etiological factors leads vitiation of Vata, Pitta & Kapha Dosha, these vitiated Dosha along with Dushti Rakta may trigger PCOS.

Nidana (causative factors):

Since the functional aetiology of PCOS is still unknown, the condition is diagnosed as the absence of other androgen and ovulatory disorders with clearly defined aetiologies. PCOS can be linked to Vandhya Yonivyapada and Nastartava. Since our classics don't address any specific aetiology, general causative factors can be assumed to be the cause of Yonivyapada:

Mithyachara

Mithyachara (faulty dietary habits) and Mithyavihara (faulty life styles) are also included. Under Mithyachara pizza, steak, bread, cold beverages, salty, fatty and frozen food in poor diets are commonly grouped.

It was found that, fast dietary changes is estimated in 5% to 10% in the general population due to westernised diets and lifestyle prevalence in reproductive age of women. A survey study conducted on

100 subjects concluded aggravating factors which includes Aharaja Nidana including Aashana, Vishamashana, Ati Madhura Ahara Sevana, Ati Katu and Vidahi Ahara Sevana and Viharaja Nidana includes Avayama, Divaswapana,

Ratrijagrana, Mutra vegdharana and Atichinta, so they can be regarded as Mithyachara in PCOS.

Bijadosha

Bijadosha comprises genetic and chromosomal abnormalities. Overexposure to androgens during the intrauterine development has a long-lasting impact on the expression of genes that cause PCOS and subsequently insulin resistance. PCOS is a genetically influenced ovarian disease that is characterised by the interaction between the disorder, other genes, and

environmental factors. Even though low birth weight and exposure to androgens during pregnancy contribute to the development of the PCOS phenotype, the genetic origin is most likely polygenic and multifactorial. Genetic factors are indicative of the high prevalence of PCOS or its characteristics in first-grade relatives. A study showed that the gene-driven linkage of polymorphisms in steroidgenic genes is supposed to regulate the resistance of PCOS as a phenotypical heterogeneity.

Srotas involved in PCOS

Srotases are the transporting channels of Dhatus undergoing transformation

Srotas involved	Lakshans in PCOS
Rasavaha srotas	Akala khalitya (premature hairfall), Gouravam (heaviness), Tandra (stupor), Pandu (anaemia),
Raktha vaha srotas	Vyanga (acanthosis nigricans), Youvana, Pidaka (acne), Panduta (anaemia)
Mamsa vaha srotas	Adhimamsa (increased body mass)
Medovaha srotas	Prameha poorvaroopa (may be due to insulin resistance and compensatory hyperinsulinemia), Atisthoulya (obesity) and Granthi (ovarian cysts)
Asthivaha srotas	Kesha loma dosha (abnormality in hair and body hair can be correlated with hirsutism)
Arthavavaha srotas	Arthavanasa (defective menstruation), Vandhyatwam (infertility)

CLINICAL FEATURES:

Following are the most commonly seen clinical features of PCOS:

1. Irregular menses- most prominent feature in which menstrual periods used to be greater than 35 days, less than eight menstrual cycles a year.
2. Ammenorrhea-lof menstruation for four months or more.
3. Variation in menstrual bleeding- Prolonged intervals that can be scanty or excessive flow of clots. Bleeding can last to more than 9days.
4. Infertility- due to anovulation, not able to get pregnant.
5. Skin Modification
6. Obesity-Abnormal increase in weight, normally with more weight around the waist.
7. Hair dilution Increased levels of androgen can induce male pattern baldness due to extreme hair loss.
8. Acanthosis nigricans-Patches of skin on the neck, arms, breasts, or thighs.

9. Skin tags- Excess flaps of skin in the armpits or neck area.
10. Pelvic Pain
11. Sleep apnea.

AYURVEDIC PERSPECTIVE OF PCOS

In Ayurveda management of a disease focuses mainly on Nidana parivarjana (avoiding the etiological factors) and Samprapti vighatana (breaking the pathophysiological process). Samprati vighatana can be done in two ways Sodhana and Samana. Sodhana is done in Bahu dosha avastha (here elimination of Doshas using Panchakarma therapies are done). In Samana, the increased Doshas are pacified by administering Oushada or medicines.

Investigation by modern techniques:

INVESTIGATION

1. Ultrasonography:-12 or more follicles in each ovary measuring 2-9mm in diameter +/- increase ovarian volume (>10ml)

2. Biochemical evidence of hyperandrogenism : serum total testosterone (>150ng/dl)
3. FSH & LH levels and its ratio >1:3
4. Insuline resistance:- raised fasting insulin levels >25 microne IU/ml²³
5. Follicular study

Management

The basic principles in the management of PCOD according to Ayurveda are as follows –

1. Nidan Parivarjana
2. Ayurvedic Drugs Used
3. Panchakarma - Treatment (Shamana/Shodhana)
4. Diet & Lifestyle Modifications (pathya aaharvihar-dinacharya and rutucharya)
5. Yogasanas/ Vyayam.

1. Nidana Parivarjana

Women should follow Swasthya Rakshana rules, such as Dinacharya (daily regimen), Rituharya (seasonal scheme), Sadvritta, Achara Rasayana, Hitahara, Samyaka Nidra (sleeping 6–8 hours), and Vyayama (physical activity) for disease prevention, in order to Nidana Parivarjana (avoid the conditions that cause the disease). Studies have also revealed that there are only minor dietary differences, that a diet rich in monounsaturated fats leads to greater weight loss, and that low-glycemic diets lessen tolerance to insulin, fibrinogens, and high-density lipoproteins in general.

2. Ayurvedic Drugs Used

Yashtimadhu- Glycyrrhiza glabra L. (Family- Fabaceae) Effect of liquorice was investigated on androgen metabolism and it is found that it can reduce serum testosterone might be due to block of 17- Hydroxysteroid dehydrogenase and 17-20 lipase. Thus, hirsutism and PCOS benefit from liquorice.

Shatavari Asparagus racemosus Willd. (Family- Liliaceae) Many studies show that infertility is useful as it promotes follicular folliculogenesis, ovulation, prepares the uterus and avoids miscarriages. Its alcohol extract improves insulin release greatly

Methika- Trigonella foenum graceum L. (Family Fabaceae) Studies on seed extract of Trigonella foenum shown significant reduction in ovary volume and size of cyst. It also showed increase in LH and FSH .

Kumari Aloe vera L. (Family- Liliaceae)

- Experimental tests have shown that Aloe Vera reduces testosterone and insulin levels by boosting progesterone and estradiol; reduces steroid receptor transcription levels; increases aromatase

expression. Aromatase is a part of the p450 cytochrome family that transforms testosterone into estradiol. Many preclinical studies identified the involvement of hyperglycaemia and steroidogenesis in reversing the estrial cyclicality to usual.

Jatamamshi Nardostachys jatamansi DC. (Family Valerianaceae)- It is reported to be beneficial in management in PCOS by its antiandrogenic effect.

Lodhra- Symplocos racemosa Roxb. (Family- Symplocaceae)- Its bark is prescribed in menorrhagia and other female reproductive dysfunctions. Many experimental studies proven that it significantly decreases the elevated levels of testosterone and restored the levels of estrogen, progesterone and cholesterol levels. It maintained the normal weight and histology of ovarian tissue and these effects were found to be comparable with clomiphene citrate.

3. Ayurvedic Panchakarma

1. Shamana chikitsa-

Rason, satpushpa, and shatavari should be given.

Agni deepan–The management approach to PCOS should concentrate on treating Agnimandya at jatharagni and dhatwagni level and alleviating srotovarodham and ultimately regularizing the apanavata, Eg. Trikatu, Chitrak etc. Ama pachan – ama is another important factor causing PCOD. Thus ama pachan gives better result in the treatment. Eg. Aarogyavardhini vati.

Kapha nashan – tikshna and ruksha aushadhi like trikatu for treating obesity in pcos. E.g. guggul kalpa Lekhan – as there is kapha dosha dominance and ama leading to strotorodha, lekhan treatment is to be given. Eg. Kuberakha vati etc.

Vata kapha hara chikitsa- To clear the avarana; for the proper follicular genesis and ovulation with the help of Varunadi Kwath and Dashmool Kwath.

Udvartan – it helps in the management of skin disorders.

2. Shodhan chikitsa-

Acharya Sushruta told that in Artava Kshaya Samshodhana should be done followed by use of Aagneya Dravya. Dalhana commentates that for purification only Vamana Karma should be used, not Virechana Karma. As Virechana Karma reduces Pitta which results in Artava Kshaya. Vamana Karma expels Saumaya (Kapha) substance results in relative increase of Aagneya constituent of body, consequently increases Artava. Acharya Chakrapani states that use of both Vamana Karma (emesis) and Virechana Karma (purgation) clears

upward and downward channels respectively. So, both procedures should be done.

Vamana Karma Vamana thus reduces body metabolism and acts directly on hepatic metabolism that is at the forefront of the formation of hormones. The relationship between oestrogen and obesity is also direct. Therefore, weight loss will boost androgen and glucose flow as well as aid ovulation and thereby increase pregnancy rates among PCOS- based obese women.

Basti Anuvasana Basti is the alternative of oligomenorrhea care in Kashyap Anuvasana Basti. According to contemporary medicine, any drug administered through the rectal pathway consumes rectum mucosal and enters systemic circulation. As the Gastrointestinal Tract is entered (GIT), Basti activates the entry of the entry nervous system (ENS) as the ENS is like the CNS. These signals are used to activate endogenous opioids, mostly β -endorphine, which inhibit gonadotropin through hormone release. Basti can activate parasympathic nerve supply and in turn contribute to follicles production and ovary release.

Nasya This can activate olfactory nerve and limbic system that, in essence, activates gonadotropin releasing neurons, regularising GnRH pulsatile secretion, leading to a standard and usual menstrual cycle. This can contribute to the development of gonadotropin releasing neurons.

Udvaartana It is stated to decrease the lipids.

Yoga – Asana It should be advised to perform Suryanamaskara in a regular way: Sarvangasana, Pashatnanasana, Ardha Matsyendrasana, Matsyasana, Suryanamaskara, Asanas and Pranayama, calming therapies, yoga and lifestyle workshops, and yogic counselling tension control. In terms of lipid enhancing, like insulin tolerance in young girls with PCOS, yoga was found to be more effective than traditional.

Pranayama-Nadishodhana Pranayama, Kapalabhati and Bhramri Pranayama should also be practiced as they are beneficial in PCOS.

Kapalabhati – The brain-pancreas endocrine system is considered to have beneficial effects and hence mostly hyperinsulinism and dyslipidaemia are pacified. It also enhances muscular blood flow and increases muscle function of the insulin receptor. It also eliminates long- term practice from waist-to-hip.

4. LIFE STYLE MODIFICATIONS OF PCOS

PCOS can be prevented / treated with the help of aahar, vihar and aushadh;

AAHAR

Pathya- **yava, amalaki, priyangu shali shastik chawal. Balanced diet is essential for normal health. Because dietetic abnormality vitiate doshas which cause various gynecological disease may result infertility. It also produce loss of dhatu which influences hormones causes menstrual irregularity. Abnormal diet hamper nourishment of fertilized egg and implantation of zygote.**

Apathya-madhur ras Pradhan aahar (potatoes sweets chocolates), Abhishyandi dravya (dahi, udad, kathal, bhindi etc), junk foods, bakery items, cold drinks, etc. should be avoided.

VIHAR

1. Dinacharya and ritucharya should be followed properly.
2. Weight reduction
3. Yogasanas: Anuloma-Viloma, Kapalabhati and Mandukasan

Vyayam (exercise) Suryanamaskar, Bhujangasana, Salabhasana, Budhakonasana, Dhanurasana, Suptavajrasana, Sirsasana, Sarvangasana, Matsyasana. These are helpful for weight reduction and to decrease blood sugar level as well and enhances tissue sensitivity to insulin (80% of the body's insulin mediated glucose uptake occurs in muscles).

4. Vyayama- just half an hour to one hour exercise at least five days in a week either in the form of aerobic exercise, resistance training or a mix of different form of exercises should be sufficient for women suffering from PCOS. This is a target which is not very difficult to achieve, but again the time spent in sedentary lifestyle has to be cut down which is the most difficult part.
5. Prajagaran.

II. CONCLUSION:

One of the main health issues is PCOS, which negatively affects a woman's quality of life and her overall health. When compared to the side effects and expense of fertility medications, new conventional treatments have a significant financial impact on societies. Samhita did not address PCOS specifically, but Acharya raised an important point regarding treatment. Dosha and Dushya, the unnamed diseases, should be comprehended and treated appropriately. Out of all the Yonivyapadas, Vandhya Yonivyapada shows the most resemblance to PCOS. In Ayurveda extended Artava meanings, i.e. menstrual blood, ovum, and

hormones help amplify and schedule the course of action for PCOS symptoms. The present analysis will address the anticipation of illness, which is considerably more effective, safer and will have lower costs for the proper treatment of pest and related comorbidities by preventing causative causes, herbal medicines, Panchakarma treatment and Yoga.

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