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A review of management of Polycystic Ovarian Syndrome through Ayurveda

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ABSTRACT

Polycystic ovarian syndrome (PCOS) is one of the fastest growing endocrinological disorder in females of reproductive age. In PCOS, follicular growth is influenced by hormonal imbalance due to which affected follicles remain in the ovary. The prevalence of PCOS is estimated 6-10% globally and 3.7% -22.5% in Indian female population, which is relatively high. It is characterised by hyperandrogenism, anovulation and polycystic ovaries seen on USG which clinically manifests in the complex form of amenorrhea or oligomenorrhea, hirsutism, acne, infertility etc. incidence of this disease increasing exponentially due to faulty dietary habits, lack of exercise, sedentary lifestyle, only focusing on career ignoring health etc. PCOS is not directly explained in Ayurveda we can corelate it with some of the conditions like Vandhya Yonivyapada, Arajaska Yonivyapada, Artava Kshaya, Nastartava, Pushpaghni Jataharini, etc. Its Hetu can be understood by different Yoniyapada Hetu, Artavavaha Srotodusthi Hetu etc. and treatment can be planned by assessing the Dosha, Dushya, Agni, Ama and Prakruti of patient. We can plan ayurvedic treatment with the help of various Ayurvedic herbal and mineral preparations, Panchakarma, along with diet and lifestyle modifications. Which can be judiciously implemented to alleviate PCOS and all associated problems.

Key words: PCOS, Artavakshaya, Vandhya, Ayurveda, Yonivyapada.

INTRODUCTION

In today's era polycystic ovarian syndrome (PCOS) is an emerging endocrinological Complex disorder characterised by - clinical, endocrinal and metabolic manifestations. It is also known a Stein - Leventhal Syndrome (1935).^[1] Manifested By - Amenorrhea,

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Hirsutism, Obesity, Enlarged Polycystic Ovaries. It also has associated comorbidities which includes irregular menses, insulin resistance leads to Type 2 Diabetes, infertility, and obesity, hirsutism, alopecia, acne, anxiety, depression and sleep apnoea and coronary heart disease.[2] Due to wide range of sign and symptoms and different clinical presentation it is underdiagnosed or not diagnosed properly. It is more annoying for female because with time distressing aspect of disease changes like from hirsutism, acanthosis, acne as a teenager to infertility as an adult. In modern medicine approach is symptomatic which includes contraceptives, oral periodic progesterone withdrawal, and metformin, antiandrogen and clomiphene citrate. But they have their own complications and long-term use associated with fatal and nonfatal lactic acidosis, weight gain, cardiovascular and thromboembolic events, hepatic toxicity which could be fatal. So, its need of time for safe and cost-effective treatment. PCOS is not directly ISSN: 2456-3110

REVIEW ARTICLE

Sept-Oct 2021

explained in Ayurveda we can corelate it with some of the conditions like *Vandhya Yonivyapada, Arajaska Yonivyapada, Artava Kshaya, Nastartava, Pushpaghni Jataharini*, etc. Its *Hetu* can be understood by different *Yoniyapada Hetu, Artavavaha Rasavaha, Medovaha, Srotodusthi Hetu* etc. and treatment can be planned by assessing the *Dosha, Dushya, Agni, Ama* and *Prakruti* of patient. We can plan ayurvedic treatment with the help of various ayurvedic herbal and mineral preparations, *Panchakarma* along with diet and lifestyle modifications Which can be judiciously implemented to alleviate PCOS and all associated problems.

MATERIALS AND METHODS

All available References have been collected from literatures, Ayurvedic Samhitas, Ayurvedic textbooks and modern text books, different websites, published articles and critically analysed.

DISCUSSION

Polycystic ovarian syndrome (PCOS)

It is a heterogenous, multisystem endocrinopathy in reproductive age women with ovarian expression of various metabolic disturbance and wide spectrum of clinical features such as obesity, menstrual abnormality and hyperandrogenism.^[3]

Etiology

Exact cause is unknown. Some factors influencing PCOS are Sedentary lifestyle, Stress, Improper diet, Insulin resistance, Enhanced androgen secretion, Genetic cause, family history, etc. Main pathology lies in Abnormalities in HPO axis, Ovaries, Adrenals and Periphery.

Clinical Manifestations^[4]

- Menstrual abnormalities like oligomenorrhoea, hypomenorrhea, amenorrhoea.
- Infertility due to chronic absence or low rate of ovulation.
- Hyperandrogenism in fully developed form we can see Hirsutism, acne, alopecia, acanthosis nigricans are seen

 Metabolic Syndrome - here we can see the Insulin resistance, Obesity, Dyslipidemia, Type 2 Diabetes, Increased risk of Cardiovascular disorders.

Diagnosis

Rotterdam's Criteria – Presence of any two factors among oligomenorrhoea/ Anovulation, Hyperandrogenism and Polycystic ovaries on USG (>12 small peripheral cysts or ovary >10cc in volume).^[5]

Treatment

The objective of Treatment includes Reduce ovarian volume, Regularization of menses (use of O C Pills.), treating infertility (ovulation induction by clomiphene citrate), reducing androgens (anti androgen cyproterone acetate), managing insulin resistance (Metformin). Surgical methods like drilling or puncture of cysts. [6] But, all these measure in their own complications and long-term use associated with fatal and nonfatal lactic acidosis, weight gain, cardiovascular and thromboembolic events, hepatic toxicity which could be fatal. So, there is need to find out a safe effective with minimal or nil Side effects.

Ayurvedic approach

PCOS is not directly explained in Ayurveda we can corelate it with some of the conditions like *Vandhya Yonivyapada, Arajaska Yonivyapada, Artava Kshaya, Nastartava, Pushpaqhni Jataharini* etc.

Hetu

Artavavaha, Rasavaha, Medovaha, Srotodusthi Hetu and Yonivyapada Hetu etc

- Yonivyapada Hetu Mithyachara It includes Mithyaahara (faulty dietary habits) and Mithyavihara (faulty lifestyle) both. reproductive age women which are undergoing rapid nutritional transitions due to westernized diets and lifestyles has more prevalence rate of PCOS.^[7]
- Pradushtartava Any hormonal imbalance or ovarian disorders, also Dysregulation of CYP 17, the androgen forming enzyme in both adrenals and ovaries.

ISSN: 2456-3110

REVIEW ARTICLE

Sept-Oct 2021

- Bijadosha Chromosomal and genetic abnormality comes under Bijadosha. During intrauterine life excessive exposure to androgens have a permanent effect on gene expression resulting in PCOS, prevalence of PCOS features among first degree relatives is suggestive of genetic influences.
- Daiva Unknown or idiopathic causes comes under Daiva.

Samprampti

Mainly Sanga and Vimargagamana can be taken.

Kaphamedakara Ahara Vihara → Agnimandhya → Amotpattii → Srotorodha → Dhatvagnimandhya → Apachita Rasadhatu → Uttorottara Dhatu Apachana leading to Medodusthi and Alpartava like Lakshanas are seen.

Roopa: we can co relate some of the *Lakshanas* explained under following disorders

- Rajakshianata Yathochita Kala Adarshana (irregular menses), Alapata (Scanty menses)
- Nastharatava Artava Nasha due to Avrutamarga, here Acharya Dalhana commenting on Acharya Sushruta verse, explains that Nastha means Na Tu Sarvatha Kshaya (not completely lost) it is just reduced in quantity so its Apravartamana (unable to express out). In Samhita Artava word extensively used in context of menstrual blood, ovum and ovarian hormones so, it can be taken in terms of oligo/anovulation, oligomenorrhoea, reduced duration of flow. [80]
- Vandhya Vandhya is considered as Nasthartava, it can be taken as the patient facing the issues of infertility due to anovulatory cycles and hormonal imbalance.
- Pushpghani Jatharini Keeping this in view, we can consider it as female whose menstrual flow is regular, but cycle is without ovulation. It results in corpulent and hairy cheeks which are associated comorbidities with PCOS. This condition is seen in PCOS as 30% of women with PCOS have normal menses.

 Lohita Kshaya, Alapartava etc. can also be considered by seeing towards symptoms of PCOS.

Chikitsa: Treatment can be divided into Nidana Parivarjana, Ahara-Vihara and Aoushadhi.

Nidana Parivarjana - avoid the disease-causing factors for the disease like junk foods, cold drinks, sedentary life style etc.

Ahara - One should take a healthy diet, follow Aharavidhi Vidhanas (rules of dietics). Acharya Sushruta has mentioned the Agneya Dravya Prayoga^[9] in case of Arthava Kshaya like Masha, Tila, Kulatha, Matsya, Udvisha, Dadhi, Sura which will help to increase the Agneyatwa of Artava.

Vihara - One should attain Dhatusamya (homeostasis) in body by observing Dincharya (daily regimen), Ritucharya (seasonal regimen), Rajaswala Paricharya (regimen to be followed during menstruation) Swasthavritta (code of conduct), Achara Rasayana etc.

Yoga - Asana regular practice of Suryanamaskara, Sarvangasana, Paschimottanasana, Ardhamatsayendrasana, Matsyasana will help improving lipid, glucose including insulin resistance values. Pranayama - Nadishodhana Pranayama, Kapalbhati and Bhramari are known to be beneficial in brain-pancreas endocrine pathway and also helps in managing insulin resistance and dyslipidaemia.

Panchakarma

Vamana - Virechana Karma - Acharya Sushruta explained that in Artava Kshaya Samshodhana should be done followed by use of Aagneya Dravya. Acharya Dalhana commented on that for purification only Vamana Karma should be used, not the Virechana Karma. Because Virechana Karma reduces Pitta which results in reduction in Agneyatwa of Artava which again leads to Artava Kshaya [10]. Vamana Karma expels Saumaya (Kapha) substance results in relative increase of Aagneya constituent of consequently, increases Artava. Acharya Chakrapani states that use of both Vamana Karma (emesis) and Virechana Karma (purgation) clears the upward and downward channels respectively. So, both procedures ISSN: 2456-3110 REVIEW ARTICLE Sept-Oct 2021

can be done accordingly. *Vamana* helps to increase metabolism of body therefore reduce weight Which can therefore improve the circulation of androgen, glucose level and help ovulation and thus enhances pregnancy rate in obese women with PCOS [11].

Basti - As there is not any Yonivyapada without Vatadosha, Basti is main treatment for Vatadosha (Ardhachikitsa) helps to maintain function of Apana Vata which is required for the normal functioning of Artava. As per Kashyapa, Anuvasana Basti is the choice of treatment in Artavakshaya (oligomenorrhoea, amenorrhoea). Basti may stimulate the parasympathetic nerve supply which in turns helps for development of follicles and release of ovum from ovary.

Uttara Basti - It is highly beneficial in gynaecological disorders as it clears the *Artavavahasrotasa* and pacifies vitiated *Apana Vayu* and promotes follicular maturity.

Nasya - It may stimulate olfactory nerves and limbic system, which in turn stimulates hypothalamus leading to stimulation of Gonadotropin Releasing Hormone (GnRH) neurons, regularizing GnRH pulsatile secretion and maintaining the HPO axis, helps in regular and normal menstrual cycle.

Drugs used - depending upon the Prakruti, Vikruti, Dosha, Dushya, Agni, Ama etc of the patient we can chose some of the ayurvedic formulations like Kanchanara Guggulu, Kuberaksha Vati, Latakaranaja Ghana Vati, Pushpadhanva Rasa, Nasthapushpantak Rasa, Rajapravartani Vati, Lashunadi Vati, Chandraprabha Vati, Rasapachak Kashaya, Medopachaka Kashaya, Dashamoolaristha, Daryaristha, Ashokaristha, Saraswataristha, Phalaghrita, Shatavari Ghrita, Dadimadi Ghrita, Rasona Ghrita etc.

We can also use single drugs like: *Meshshringi* - (*Gymnena sylvestre*, Family-Asclepiadaceae) Studies reported that it reduces the absorption of glucose in intestines, stimulates beta cell pancreatic growth and insulin release from beta cells. *Shatavari* - (*Asparagus racemosus*, Family- Liliaceae) Many research prove that it is beneficial in infertility as it stimulates

folliculogenesis, ovulation, prepares the uterus for conception and prevents miscarriages. Its alcohol extract significantly enhances insulin release.[12] Methika - (Trigonella foenum graceum, Family-Fabaceace) Studies on seed extract shown significant reduction in ovarian volume and size of cyst. It also showed increase in LH and FSH level. Kumari - (Aloe vera, Family-Liliaceae) - Experimental studies shown that Aloe Vera decrease the levels of testosterone and insulin through improving the levels of progesterone and estradiol, decreasing the transcription levels of steroidal receptors; increasing aromatase expression which converts testosterone into estradiol and androstenedione into estrogen Also helps in regulating hyperglycaemia and modulating steroidogenesis. Jatamamshi (Nardostachys jatamansi, Family- Valerianaceae)- It is reported to be beneficial in management in PCOS antiandrogenic effect [13]. Lodhra – (Symplocos racemose, Family-Symplocaceae) - Its bark is prescribed in menorrhagia and other female reproductive dysfunctions it significantly decreases the elevated levels of testosterone and restored the levels of estrogen, progesterone and cholesterol levels, maintain the normal weight and histology of ovarian tissue and these effects were found to be comparable with clomiphene citrate

CONCLUSION

Polycystic ovarian syndrome (PCOS) is an emerging Complex endocrinological disorder whose main culprit are changing sedentary lifestyle, faulty food habits, not following the regimens explained according to Desha, Kala and Rutu. Not properly following menstrual regimen (Rajaswala Paricharya), lack of exercise etc. While adopting the modern medicine like hormonal pills, clomiphene citrate, antiandrogens, etc having its own limitations and patient have to face side effects like weight gain, drug reaction, headache, risk of thromboembolism^[14] etc. PCOS is not directly mentioned in Ayurveda, but it can be corelated with some of the diseases like Vandhya, Nasthartava, Aratava Kshaya, Pushpaghni Jataharini, etc. and also my considering the particular Sroto Dushti, Avarodha, Agni, Ama, etc. we can choose proper Shodhana and ISSN: 2456-3110

REVIEW ARTICLE

Sept-Oct 2021

Shamana drugs for patient. Along with that following Nidana Parivarjana, doing proper Vyayama - Pranayama, improving dietic habits. With all these holistic approaches of Ayurveda will help the patient to come out of PCOS and its related metabolic abnormalities in the body successfully with no or minimal side effects. Hence, Ayurveda is a ray of hope for the patients suffering from Polycystic Ovarian Syndrome.

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