

A CONCEPTUAL REVIEW ON PCOS

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ABSTRACT

Polycystic ovarian syndrome is one of the most common female endocrine disorders which are emerging as the major cause of infertility. It is found in females of reproductive age group characterised by atypical menstrual cycle pattern, hormonal disarrays and polycystic ovaries. Lack of exercise, stress, sedentary life style and anxiety accompanied with junk food worsen the prognosis. Severe hormonal derangements give rise to the clinical manifestation that is oligomenorrhoea or amenorrhoea, obesity, hirsutism and most importantly infertility. It is difficult to diagnose due to heterogenous presentation and varying features with age. It is frequently associated with insulin resistance and obesity.^[1] PCOS associated some features

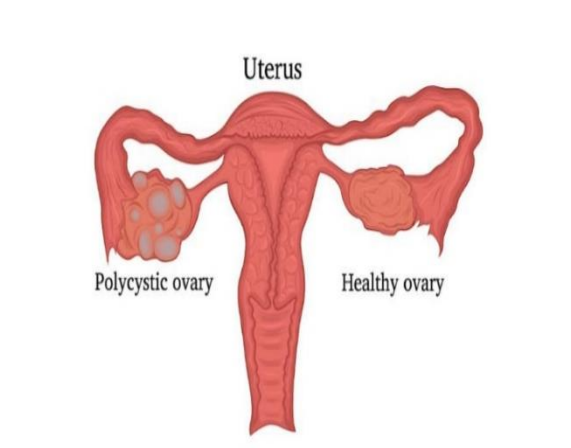
are closely related with some of *Yonivyapada* (*Pushpaghni*) and some features with *Artavadushti*. Maximum congruence of PCOS can be established with *Bandhya Yonivyapada*. In Ayurveda, PCOS involves *Vata* and *Kapha Doshas*, *Meda*, *Mamsa* and *Rakta Dhatus*. Possible line of treatment is *Nidanaparivarjana*, *Samshodhana*, *Aagneya Dravyas*, *Swayonivardhana Dravyas*. *Chikitsa Siddhanta* aims *Agni Deepana* and *Aam Pachana*. Hence PCOS can be managed with ayurvedic treatment along with life style modifications.

KEYWORDS: PCOS, *Artava*, *Bandhya Yonivyapada*, hormonal imbalance.

INTRODUCTION

PCOS is probably the fastest growing health hazard amongst women of reproductive age. It's prevalence in general population is 5-10% worldwide, while among this %, approximately 80% had the clinical presentation of infertility. This familial disorder appears to be inherited

as a complex genetic trait.^[2] PCOS is the condition where a hormonal imbalance affects follicular growth during the ovarian cycle causing the affected follicles to remain in the ovary. The retained follicle forms in to a cyst and with each ovarian cycle a new cyst is formed leading to multiple ovarian cysts. Due to wide range of sign and symptoms and different clinical presentation it is underdiagnosed or not diagnosed properly. Due to variability of symptoms patients may seek help from a gynaecologist, dermatologist, endocrinologist or general practitioner and lack of well- defined diagnostic criteria mimics any disease and create illusion for the identification of this common disorder to the clinician. Furthermore, it is more annoying for female because with time distressing aspect of disease changes like from hirsutism, acne as a teenager to infertility as an adult. PCOS is a major cause of infertility in females. The association of amenorrhoea with bilateral polycystic ovaries and obesity was first described by Stein and Leventhal. PCOS is mainly presence of chronic anovulation and hyperandrogenism. As the aetiology is poorly understood, there is controversy about diagnostic criteria, clinical features of the syndrome. In Ayurveda *Hetus* (causative factors) got primary importance and considered as root cause for disease. *Nidana Parivarjanameva* is stressed in Ayurveda as *Chikitsa*. This particular feminine disorder is not described word to word in Ayurveda. PCOS associated some features are closely related with some of *Yonivyapada* yet some features nearly bring in to relation with *Aartvadushti*. We know that most gynaecological disorders come under the heading of *Yonivyapada*.^[3] The management of PCOS is difficult and challenging task, faced by modern gynaecologists. So, the holistic approach is demanded specially in Indian subcontinent because of high prevalence here (52%).^[4] In modern science they focus on obesity giving hormonal pills as a treatment in medicinal therapy which has various side effects. So, the objective of this article is to provide better treatment through Ayurveda. All the abnormalities associated with PCOS should be seen as different pathological conditions of *Dosha*, *Dushya*, *Roga Adhithana*. Only the variation in these constituent's results variation in onset and symptoms of the disease.



AIMS AND OBJECTIVES

- To evaluate symptomatology of PCOS w.s.r. to Ayurveda symptoms.
- To find out possible line of treatment of disease in Ayurveda texts.
- To study the etiological factors of PCOS, according to the *Samhitas* and modern lifestyle.

MATERIAL AND METHODS

Ayurveda classics, Commentaries, Modern literature, Other recently published books and research journals were thoroughly studied and then an effort was made to understand this syndrome.

Aetiology

In the context of *Yonivyapadas*, there are four basic causative factors i.e. unwholesome lifestyle, menstrual disarrays (*Dushti* of ova and *Bahipushpa* i.e. menstrual blood), genetic disorders and some divine factors, responsible for the manifestation of the syndrome. It is a disorder involving *Vata* and *Kapha Doshas* along with *Meda Dhatu dushti*. On the basis of Ayurvedic interpretation PCOS can be enumerated as *Rasapradoshaja* and *Santarpanottha Vyadhi*.

Ahara and *Vihara* causing *Vata-Kapha Dushti* and *Medo Dushti*, will be the key factors causing the expression of the syndrome. Genetic and environmental contributors to hormonal disturbances combine with other factors, including obesity ovarian dysfunction, and hypothalamic pituitary abnormalities to contribute to the aetiology of PCOD. Obesity increases hyperandrogenism, hirsutism, and infertility and pregnancy complications independently and by exacerbating PCOD.

Conceptual Reference of PCOS in Ayurveda

In Ayurveda, majority of gynaecological disorders have been described under the heading of *Yonivyapada*, though some of the menstrual abnormalities like *Asrigdara* etc., have been described separately. For complete knowledge of menstrual disorders, the knowledge of *Yonivyapada* & *Aartvadushti* is essential. *Acharya Sushruta* described *Bandhya Yonivyapada* whose main feature is *Nashtartava*.^[5] He says the passage is encircled by *Vata* and *Kapha* and ultimately results in amenorrhoea.^[6] Word *Aartava* has been used extensively in *Samhita* in context of menstrual blood, ovum and ovarian hormones.

Ayurvedic perspective of PCOS In Ayurveda, the balance state of *Doshas* is mainly responsible for health and any derangement to this will lead to disease. This *Dosha-Vaishamya* is directly connected to symptoms and the relation between *Doshas* and *Lakshanas* are permanent.

Pathogenesis

Typically, the ovaries are enlarged two to five times the normal size (PCOS – Ovarian cysts). Stroma is increased. The capsule is thickened and pearly white in colour. Ovary which is normally oval in shape, will have many cysts within it. Histologically there is thickening of tunica albugenia. The cysts are follicles at varying stages of maturation and atresia. There is theca cell hypertrophy (stromal hyperthecosis). Patient may present with features of diabetes mellitus (insulin resistance). Careful survey concludes that the biggest lifestyle contributor to PCOS is poor diet. Young women with PCOS tend to eat far too much sugar or carbonized drinks and highly refined carbohydrates which causes unhealthy raise in insulin levels. According to world fame Jerilyn Prior, insulin stimulates androgen receptors outside of ovary, causing typical PCOS symptoms which also play a role in blocking release of ovum from follicle. This type of diet will cause obesity and thus aggravating PCOS. Also, in stressful women, as they eat more food that are high in fat, sugar and carbohydrate in response to stress, the more fat they store, thus, contributing in the development of obesity-linked PCOS.

Clinical features of PCOS

The clinical manifestation of this disease varies from mild menstrual irregularities to severe reproductive and metabolic dysfunction.

- Menstrual irregularities commonly observed in PCOS include Oligomenorrhoea (85-90%) or Amenorrhoea (30-40%).^[7]

- Hirsutism is a common clinical presentation of hyperandrogenism occurring in up to 70% of women with PCOS.^[8]
- Acne can also be a marker of hyperandrogenism, approximately 15-30% of women presents this feature.^[9]
- PCOS is the commonest cause of anovulatory infertility 40%.^[10]



Clinically PCOS often manifest itself at menarche with some form of menstrual irregularity, but not essentially. The principal signs and symptoms of PCOS are related to menstrual disturbance and elevated levels of male hormones (androgens). There may be abnormal growth of hair at different places of the body. In some patients, due to insulin resistance, a dark coloured band like skin lesion may be developed at the back of the neck, inner thighs and axilla, called as Acanthosis nigricans. Internal examination reveals bilateral enlarged cystic ovaries which however may not be revealed due to obesity.^[2-5]

Management of PCOS

The line of treatment for PCOS patient depends only on the basis of symptoms. Symptomatically there are three types: menstrual disturbances, symptoms due to hyperandrogenism and infertility. Modern view for treatment is Oral contraceptive pills in menstrual irregularities, anti-androgens and other ovulation induction related drugs in infertility. Careful history taking and minute observation during a clinical examination is the main source for diagnosing. In Ayurveda, the management of PCOD should concentrate on treating *Agnimandhya* at *Jatharagni* and *Dhatwagni* level and alleviating *Srotavarodhana* and ultimately regulating the *Apana Vata*. So, Ayurvedic protocol for PCOD includes: -

- 1) **Shodhana chikitsa^[11]**: It includes *Panchakarma Upachara* especially *Basti* in conditions of *Vata*. Other *Panchakarma* modalities *Vamana* (emesis), *Virechana* (purgation) are also prescribed for vitiated *Kapha*, *Pitta* respectively. *Snehana* (oleation), *Swedana* (sudation) to be *Chikitsa*.^[3] *Samshodhana* is a process by which waste products or harmful products are thrown out side either by *Adhomarga* or *Urdhwamarga*. Use of purification measures also clear the obstruction of *Aartvavaha Strotsa*. *Acharya Chakrapani* says that use of *Vamana* and *Virechana* both purification measures clear upward and downward channel respectively. So, both procedures should be done.
- 2) **Shamana chikitsa**- Ayurveda has wide range of medicines to give strength to ovarian function.
 - **Nidana parivarjana**: Eradication of causative factors is foremost treatment of any disease. Faulty dietary habits should be corrected. Intake of *Mithya Aahara* like pizza, burger and cold drinks should be strictly stopped. Abnormal life style should be corrected. Daily exercise, practise of *Yoga Pranayama* (*Kapalbhati*, *Suryanamskar*) will help in weight reduction as well as in hormonal regulation.
 - The management approach to PCOS concentrate on treating *Agni-Mandya* at *Jatharagni* and *Dhatwagni* level and alleviating *Srotovarodham* and regularizing the *Apana Vata*. *Aama Pachana* and *Agni Deepana* through *Chitrakadi Vati/Panchkola Churna*.
 - *Pathadi Kwatha* described by *Sushruta* in *Vatakapahaja Aartava Dushti* when given orally with *Shatapushpa Tail Matra Basti* for seven days after cessation of menstruations is found to be effective. *Aama Pachana*, *Srotoshodhana* and *Vata Kapha Shamaka* properties may be responsible for efficacy *Kumara Ghrita* described by *Acharya Vagbhata* reduces the size of ovarian cyst.^[12]
 - *Shatapushpa Churna*: *Balya*, *Deepana*, *Pachana*, helps in ovulation, is the drug of choice in any disease, *Vata Kapha Shamak*, *Pittta Vardhaka*, due to its *Katu*, *Tikta Rasa*, *Ushna*, *Tikshna*, *Snigdha guna*.^[13]
 - *Narayan Tail*: With its *Katu Tikta Rasa*, *Laghu*, *Rukshaguna*, *Ushna Virya*, *Katu Vipaka*, *Vata Kapha Shamak* and ultimately leads to such as *Deepana*, *Pachana*, *Vilayana*, *Anulomana* and *Srotoshodhan* resulting in *Aampachana* and *Vata Kapha Shamak* which removes *Sanga* and *Aavarana* leading to proper function of *Vayu* regulating karma resulting in *Bijotsarg* (ovulation).^[14]
 - Use of various *Lekhana Dravyas* like *Takra*, as described by *Acharya Charaka* along with lifestyle modification of *Medovridhhi*. Dietary modifications are also useful.

- *Dincharya* of the patients should be adjusted to that described in Ayurveda as far as possible.
- **Correcting hormonal imbalance:** There are many herbs useful in correcting the hormonal imbalance. *Ashoka* (*Saraca asoca*), *Dashamoola* (a group of ten herbal roots) a group of herbs useful in preparation of *Sukumara Kashaya* like *Ashwagandha*, *Eranda*, *Shatavari* etc. are useful in correcting the hormonal imbalance.
- Treatment to obesity and specifically against cholesterol can be achieved by using Ayurvedic herbal remedy plus diet and lifestyle changes.
- Treatment for insulin resistance involves a time-consuming approach with effective Ayurvedic treatment and diet and lifestyle changes including exercise.
- **Aagneyadravya:** *Aartva* is *Aagneya* in nature. *Aagneya Dravya* is said to be having *Vata*, *Kapha Shamaka* and *Pitta Prakopaka* properties. *Aagneya Dravya* causes increase in amount of *Aartva* and also helps in removal of *Kapha* and *Vata Aavarna* and cure the disease.
- **Swayoni vardhan dravya:** Here *Swayoni-Vardhana* means those measures which are helpful for *Aartava-Vridhi*. Administration of *Dravyas* like *Tila*, *Kulatha* is advisable as same *Guna Dravya* increases *Pramana* of *Aartava*.^[12]

Classical formulations

1. *Kanchnara guggulu*
2. *Pushpadhanva rasa*
3. *Nashtapushpantaka rasa*
4. *Rajah pravartani vati*
5. *Aarogyavardhini vati*
6. *Chaturbeeja choorna*
7. *Varunadi kashaya*

DISCUSSION AND CONCLUSION

PCOS is a highly complex endocrine disorder. It is a leading cause of infertility, menstrual disturbance and is associated with obesity, hirsutism and chronic anovulation. PCOS can't be correlated with a single entity in Ayurveda but has some resemblance with *Pushpaghni Jataharini*. Others are *Shandi Yonivyapad*, *Vandhya* of *Charak*, *Vandhya Yonivyapad* of *Sushruta*, *Vikuta Jataharini* of *Kashyapa*. Obesity is the main cause and symptom which can be prevented by following *Dincharya* and *Ritucharya* and can be reduced by *Pathya Aahar*,

Vihar, *Aushadh* and restriction of *Apathya Aahara Vihara*. PCOS is not explained vis-a-vis in *Samhita* but *Acharya* have made their point regarding treatment. Unnamed disease should be understood by their *Dosha* and *Dushya* thus treatment should be planned accordingly. Out of all *Yonivyapada*, *Vandhya Yonivyapada* shows maximum similarity with PCOS. Expanded meanings of *Aartava* i.e. menstrual blood, ovum and hormones help to amplify PCOS symptomatology in Ayurveda context and plan its line of treatment. Therefore, the present review discusses the anticipation of disease by prevention of causative factors, drugs from plant sources, *Panchakarma* treatment and Yoga which are significantly effective, safer and will have low cost for proper management of PCOS and associated comorbidities.

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