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## A review article on polycystic ovarian syndrome: Both ayurvedic and modern concept

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### Abstract

Polycystic ovarian syndrome is a heterogeneous, lifelong, multisystemic endocrinopathy. It is diagnosed by two out of three criteria i.e. Hyperandrogenism (Hirsutium, Acne), Oligo/anovulation and polycystic ovaries. This disease involves series of progressive disorders characterized by Insulin resistance, Premature adrenarche, Heart disease, Obesity, Infertility, Diabetes mellitus, Dyslipidemia, Endometrial hyperplasia, Cancer. Many females with Pcos give history of infrequent cycles, Acne, Acanthosis nigricans, Hirsutism. In Ayurveda, the exact disorder is not explained but its symptoms can be correlated with *Artavakshaya* (Oligomenorrhoea), *Anartav* (Amenorrhoea/Anovulation), *Vandhya yonivyapad* (Infertility), *Pushpaghni jataharini*, *Atisthula* (Obesity), *Atiloma* (Hirsutism), *Madhumeha* (Insulin resistance). So, the possible line of treatment involves *Nidana parivarjana*, *Dinacharya-Ritucharya*, *Samsodhana*, *Samshamana chikitsa*.

**Keywords:** PCOS, Artavakshaya, oligomenorrhoea, genetic, familial, and environmental factors

### Introduction

Polycystic ovarian syndrome is a clinicopathologic syndrome. The prevalence rate of PCOS is high among Indian women. The pooled prevalence of PCOS is 10% using the Rotterdam's Criteria and AES criteria while it is 5.8% using NIH criteria. PCOS is the known cause of anovulatory infertility. The origin and pathogenesis of PCOS, initially ovaries were thought to be the main organ which cause the changes in endocrine pattern i.e. excessive androgen production etc. Later on, Genetic, Familial, and Environmental factors are also added. The pathophysiology of PCOS comprises of: <sup>[1]</sup> Hypothalamic-pituitary compartment <sup>[2]</sup>, Excessive Androgen <sup>[3]</sup>, Anovulation <sup>[4]</sup>, Insulin resistance and obesity <sup>[5]</sup> Long term consequences.

### Excessive Luteinizing Hormone

In PCOS pituitary gland releases abnormally high amount of Luteinizing hormone which hinders follicle maturation which causes Anovulation. These immature follicles cause fluid-filled sacs or cyst formation.

### Excessive Androgen Hormone

These cysts produce high amount of testosterone which results in Acne, increased facial and body hairs and irregular menstruation.

### Excessive Insulin Production

Pancreas secretes high levels of insulin hormone then it combines with LH which causes more production of testosterone in ovaries. Abnormally high amounts of testosterone again cause Anovulation which will lead to infertility. Along with infertility it also increases the risk of Diabetes mellitus, Heart disease, Dyslipidemia, Hypertension and Endometrial cancer.

### Symptoms

Obesity (Abdominal/Central 50%), Menstrual abnormalities (70%) - Oligomenorrhoea and Amenorrhoea is common and Menometrorrhagia is rare, Hirsutism (70%), Acne (70%), Acanthosis nigricans.

**Diagnosis**

**Rotterdam diagnostic criteria 2003: If two out of three criteria are found than it is diagnosed as PCOS**

1. Oligo/Anovulation.
2. Clinical and/or biochemical Hyperandrogenism.
3. Polycystic ovaries (either 12 or more follicles or increased ovarian volume  $> = 10 \text{ cm}^3$ ).

**Differential diagnosis**

- Thyroid dysfunction.
- Congenital adrenal hyperplasia.
- Hyperprolactinemia.
- Adrenal tumours.
- Ovarian tumours.

**Management**

**Medical Management:** Combined oral contraceptive pills, Progestin-only pills, Cyproterone, Metformin, Clomiphene, Dexamethasone.

**Surgical Management:** Laparoscopic ovarian drilling, Bariatric surgery.

**Ayurveda perspective**

In *Ayurveda*, *Trisutra* are used to study and understand the disease and they are *Hetu*, *Linga* and *Aushada*.

In *Ayurvedic* classical context, PCOS is not mentioned by name. According to *Acharya Charak*, it is impossible to name all diseases than treatment should be done according to vitiated *doshas*, *lakshana*, *Prakriti*, *vikrati*, *adhithana*, or by the *nidana panchaka*. PCOS can be correlated with many gynaecological disorders which have same symptoms like PCOS i.e. *Yoni vyapad* (*Arajsaka*, *Bandhya*, *Lohitakshaya*), *Pushpaghani jataharini*, *Aartav kshaya*, *Anartav*, *Atisthula*, *Atiloma*, *Madhumeha*. According to *Ayurveda*, *Agnimandhya* is the main cause of disease. Consumption of *virudha aahara* vitiates *vata* and *kapha dosha* which cause *Pachakagni mandhya* that leads to *Ama* formation and then no *uttar uttar dhatu poshan* occurs. Firstly *Rasa dhatu* and its *updhatu Aartav* (Menstrual blood) gets vitiated and it causes *Artavakshaya*. Then *Rakta* and *Mamsa dhatu* gets vitiated and cause Acne, Dull complexion, Lethargy, Weakness. Then *Meda dhatu* vitiation cause obesity. *Asthi dhatu's updhatu* is *kesha* and its vitiation cause Hirsutism, Greying of hairs, Alopecia. Then *Majja dhatu* vitiation cause Depression, Mood swings and hormonal imbalance.

*Aartav kshaya - Aartav kshaya Yathochit Kala adarshanam alpha va yonivedna cha.*

*Anartav - Punarasham atisamshodana atisamshaman vegadharana asatmya annamastap vyayama anshana atimathuna bhavti.*

*Bandhya yonivyapad - Bandhyam Nashtartvam vidhyat chastrastpichadyasu bhavantyanivedna*

*Pushpaghni jataharini- Vritha pushpam tu yo nriyathakala prapashyati Sthulalomashganda vpushpaghni sa api revati.*

**Ayurvedic management**

- Nidana Parivarjan- Kaphavata hara ahara-vihara.
  - Dincharya-Ritucharya.
  - Samshamana chikitsa.
- a) **Ekala Dravya:** Shatavari, Ashwagandha, Tila, Shatpushpa
  - b) **Agneya dravya:** Tila, Marsha, Sura, Shukta are described by *Acharya Dalhana* to increase pitta (*Su. Sutra 15/12 Dalhana tika*)

**Classical formulations**

- Tab *Kanchnar gugglu*.
- Tab *Arogyavardhini vati*.
- Tab *Chandraprabha vati*.
- *Varunadi kwath*.
- *Kumarya aasav*.
- *Dashmoola arishta*.
- *Nashtapushpantak rasa*.
- *Samshodhana chikitsa - Vamana, Virechana, Anuwasana basti and Uttar Basti*.
- *Yoga aasana- Sarvangasana, Matsyasana, Ardhamatsyendrasana, Paschimottanasana, Surya Namaskar, Ushtrasana*.

The main cause of disease is increased *kapha* and *vata* and to pacify *kapha* and *vata*; *laugh*, *Raksha*, using drugs are required for this *Agneya Dravya*, *ekala Dravya* and classical formulations are given.

For *samshaman chikitsa* mostly all the drugs used in treatment are *ushna*, *tikshna*, *rooksha* and *katu* in potency and they have *lekhana*, *raktashodhak*, *aartav janana*, *granthi hara*, *garbhastravakar* properties because of these properties they work on PCOS.

For *samshodhana chikitsa vaman* is given to the patients of *aartav kshaya* because it removes *saumya* substances resulting in relative increase in *agneya* constituents of the body, consequently *aartav* also increases. *Anuwasana basti* is given because it is the best treatment for *Alpapushpa* and *Uttar Basti* is also given to pacify *apana vayu* with *Kashmariphala* and *kutaj tweak ghee*.

**Conclusion**

Polycystic ovarian syndrome is a complex disorder with multiple etiologies. To treat PCOS one needs controlled and healthy balanced diet along with exercise for weight reduction, medication and lifestyle changes. Avoid junk food, soft drinks, oily food, sedentary lifestyle etc. Thus adopt a holistic treatment, a good lifestyle i.e. Meditation, *Yoga*, *Pranayam*, Stress-free living, and Appropriate diet can prove to be beneficial in management of PCOS.

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