Concept of Polycystic Ovarian Syndrome in Ayurveda Perspective

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Abstract: Polycystic ovarian syndrome is an endocrine disorder of HPO (hypothalamic pituitary ovarian axis). In India PCOD prevalence is 4.25% and in adolescence is 9.13%. The incidence of PCOD is more in obese women than in lean women. PCOD is life style disorder because of sedentary lifestyle & unhealthy food habits. Its characteristics are oligomenorrhea, amenorrhea, primary or secondary infertility, obesity, hyperandrogenism. PCOS is not a disease rather it is syndrome which includes multiple factors & multiple system. In ayurveda classic there is no direct co - relation with PCOS but it can be understood in terms of like anarta, aartavaksha, nastaartava. Acharaya Charka says that all the disease could not be named, so Vaidya should know the disease condition according to the involvement of dosha, dhatu and srotas. In the present study an attempt is made to understand PCOS with the help of hetu, lakshana, dosa, dhatu, samprapti in ayurveda.

Keywords: PCOS, oligomenorrhea, Anarta, aartavaksha, nastaartava

1. Introduction

PCOS is a common endocrine condition of the hypothalamic pituitary ovarian axis that results in anovulation or oligo-ovulation, which increases the amount of androgen in the ovary's cortex.¹ In PCOD, ovaries are enlarged, ovarian volume increases by more than 10cm³, and many follicular cysts are clustered around the cortex.² The prevalence of PCOS ranges from 2.2% to 26% among women aged 18 to 45. In India, its prevalence is between 4% and 25%. The prevalence of PCOS is rising daily as a result of dietary changes, stress, a lack of exercise, and altered lifestyles.³ In Ayurveda classics for PCOS, there is no direct correlation, but we can understand it’s Nidanapanchaka by analyzing doshas, dhatu, dhatu, agni, strotas etc.

Aim and Objective

1) To study etiopathogenesis of PCOS w. s. r to nidanapanchaka.
2) To evaluate symptomology of PCOS w. r. s to ayurveda lakshana.
3) To evolve the management principles and enlist certain Ayurvedic drugs that would be beneficial in the management of the polycystic disease.

2. Materials and Methods

Modern literature, all available ayurvedic classic, commentaries, journals and research paper were thoroughly studied and then an effort is made to understand PCOS.

Type of the study: Conceptual study

Nidanapanchaka for Polycystic ovarian syndrome - Factors causing all vyadhis are nidanapanchaka - nidana, ppoovarooopa, roopa, upashhaya, samprapthi.⁴

1) NIDANA: Nidana is the causative factor for any disease. In classics, no specific etiology is mentioned, so general causative factors of yoniivyapad can be taken as etiological factors for PCOS, which are Mithya achara, Pradushtha artava, Bijadosha, Daiva.⁵

a) Mithya achara: includes both mithya - achara and mithya - vihara. Acharya Sishruta and Vagbhata mentioned that vata and pitta are responsible for nashtartava and anaartava, and vitiated kapha aaarvutha vati.⁶ ⁷ ⁸ In Nidana of Aartava Kshaya, Dalhana enumerates Vega Dharana, anna, manasthapa, avyyayama etc.

Nidana for vata & kapha aggravation

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<th>HETU</th>
<th>HETU FOR VATA AGGREGATION</th>
<th>HETU FOR KAPHA AGGREGATION</th>
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<tbody>
<tr>
<td>Aharaja hetu</td>
<td>Rasa - ati tikta &amp;Kashaya prominent aahara. Guna - excessive intake of laagh, sheeta, raksha aahara</td>
<td>Rasa - ati Madhir, ati - lavana aahara Guna - excessive intake of guru, abhishyanadi, picchila aahara</td>
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<td>Vihara hetu</td>
<td>Atiyayavya</td>
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<td>Ati - vyayama</td>
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<td>Ratri jagrana</td>
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<td>Vegadharrana</td>
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<tr>
<td>Manasika hetu</td>
<td>Krohda (anger)</td>
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<td></td>
<td>Chinta (stress)</td>
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<td>Bhaya (fear)</td>
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These ahara and vihara nada can be correlated with the cause of PCOD, i.e., sedentary lifestyle, diet, and stress.50–70% of patients with PCOD are obese or overweight because of adhyasana, or overeating leads to agnimandhya, by which proper rasa dhatu will not be formed and manifests sthautlya. Variation in sleep patterns leads to an imbalance in hormones.

b) Pradushta artava: Artava can be correlated with ovarian hormones. In PCOD patients, the HPO axis is altered, which maintains ovarian hormone, so an imbalance in hormone leads to PCOS.

c) Bijadosha: It includes genetic and chromosomal abnormalities. First - degree relatives have more chance of PCOS.

d) Daiva: It includes an unknown factor, idiopathic.

2) POORVAROOPA: Poorvaroopa are mild symptoms of vyadi, or the initial stage of disease. Mild symptoms of PCOD are menstrual irregularities, scanty bleeding, acne, weight gain, etc., before involvement of multiple organs and systems.

3) ROOPA: PCOD becomes PCOD when multiple organs and systems are involved and manifest endocrinological, metabolic and psychological signs and symptoms. This condition can be considered roopa when all the signs and symptoms appear.

The following signs and symptoms are seen in PCOS:
- Atithshoulya: Obesity is one of the main criteria in PCOS. Vitiated kapha dosha causes medodhata dushti, which leads to
- Vamdhya: In PCOS, there is anovulation, which leads to infertility. Upadhatu of rasa dhatu are stanyaa and aartvaa. If rasa dhatu is not formed properly, then artava dhatu is also not formed properly, and in the long term, it causes Vamdhya.
- Angamaarda: In Long term PCOD, insulin resistance leads to reduce glucose uptake causing lethargy.
- Ashraddha: - Kaptha aahar vihara cause indriya lepa and effect on mana which by function is hampered and manifest ashraddha. In PCOS mood swings and depression are very common.
- Akala khalita - paliita: graying of hairs and hair falling because of more androgen hormone.
- Neelika means high pigmentation of the skin. It is seen in raktavaha srotas dushti. Improper utharothartha dhatu formation this In PCOS, there is thickening and darkening of the skin around the neck, underarm, and groin region—Acanthosis Nigricans.
- Anauratta, nastaurattva, and artava kshaya: Apana vata aavrita by kapha, which obstructs the apana vata's normal function. In PCOS, due to hormonal imbalance, menstrual irregularities will be present.
- Atyartva: Sometimes the release of avarana will be there, which causes prolonged bleeding and excessive
- Atiloma: It is pitruja bhava. Excess insulin stimulation causes the ovaries to produce more androgen.

4) UPASHAYA: Upashaya ahara and vihara mean that they decrease the signs and symptoms of disease. Here, upashaya ahara, pitta vardhaka, and kapha samaka. Upashaya vihara: yoga like Surya Namaskar, Pranayama, jogging, aerobic exercise, cardio exercise, etc. Anupsaya ahara & vihara: vata, kapha, and medo vardhaka, like stress, anger, sleeping during the day, late - night sleep, etc.

5) SAMRAPATI CHAKRA:
Kapha - vatakara
Ahar - vihara→Agnimandhya→Amottpattii→Srotorodha→Dhatvamandhya→Apachita Rasadhauta→Uttarotthara Dhatu Apachana leading to rasa - dhatu dusti (Lakshanas - Aartva dushti, beej dushti), raktta - dusti (Lakshanas - ppidika), mamsa - dusti (Lakshanas - granthi), Medodusthi (Lakshana - satistholya), asthi - dusti (Lakshanas - Atiloma) etc.

6) Line of treatment for PCOD/PCOS as per Ayurveda
A) Nidana Parivarjana:
B) Panchakarma Therapy (Shodhana Chikitsa)
C) Ayurvedic drugs (Shamana chikitsa)
D) Yogasanas/vyayam.
E) Pathya /Apathya - Ahara

A) NIDANA PARIVARJANA:
Avoiding the root causes is essential for all diseases, particularly lifestyle conditions. It will facilitate curing and prevent recurrence. Lifestyle changes are a major predisposing factor for PCOS, particularly irregular and unhealthy eating habits, a lack of exercise, mental stress, etc.

B) SHODHAN CHIKITSA:
Samshodhana is indicated as a detoxifying method that not only eliminates waste from the body but also regulates the functioning of the srotas. Shodhana detoxifies the body through Adhomarga or Urdhvwamarga, hence clearing obstruction of the Aartvavaha Srotasa, which is one of the causes of PCOS. Detoxification treatments such as Vamana, Virechana, and Basti Chikitsa have been suggested for the treatment of PCOS symptoms. Vamana promotes hormonal equilibrium and reduces the tendency to gain weight. Virechana eliminates ama, which clears minute channels and corrects menstrual irregularities. Basti increases fertility and regulates hormonal processes. Basti also nourishes reproductive organs and enhances the circulatory system, hence treating Rasa Dhatu Dushhti.

C) SHAMANA CHIKITSA:
Shamana chikitsa is performed by providing several medications for the vitiated Doshas.

Agni Deepana: The treatment approach to PCOS should focus on treating Agnimandhya at the jatharagni and dhatwagni levels, reducing srotavrodham, and eventually regularizing the apanavata, such as Trikatu, Chitrak, etc.
Ama pachana—Ama is another key cause of PCOD. Thus, ama pachana produces a better outcome in the treatment. Example: Aarogavyardhini vati.
Kapha nashana - tikshna and ruksha aushadhi, also known as trikatu, are used to treat obesity in PCOS. For example, guggula kalpa
Lekhana: Because there is kapha - dosha dominance and ama - causing srotorodha, lekhan therapy is recommended.
Vata kapha hara chikitsa: To cleanse the avarana and promote normal follicular genesis and ovulation utilizing Varunadi Kwatha and Dashmool Kwatha.

Classical Ayurvedic treatments for PCOS include:
- Nashtapushpantaka Rasa
- Kanchnara Guggulu
- Shatavari choorna
- Satapushpa choorna
- Rajah Pravartani Vati
- Aarogyavardhini vati
- Chandraprabha vati
- Dashumarishtha

Nashtapushpantaka Rasa: Nastapushpantaka Rasa can be given in cases of nastapushpa, which might be amenorrhea or anovulation. It contains mineral medications with qualities such as Rasayana, Yogavahi, Aartava Janana, Tridosha Hara, and Kapha Vata Shama.

It also serves as anulomaka, vajikara, yoniyapadahara, and raktaashodhaka. Drugs contain chemical components with hypolipidemic, hypoglycaemia, folliculogenesis, antioxidant, and hepatoprotective properties.

Kanchnara Guggulu: Granthihara, vatakaphashamak, and aartavajika characters of Kanchnara guggulu and break down the pathogenesis of granthi. The major component in Kanchnara guggulu is Kanchnara (Bauhinia variegata). It effectively treats PCOS through lekhana, deepana, and pachana activity. Kanchnara guggulu contains kutu rasa, ushna veerya, and kutu vipaka, which reduce the size and formation of numerous cysts in the ovaries, improving ovulation.

Shatavari Churna: Shatavari Churna is a traditional Ayurvedic medication. It promotes regular ovarian follicle growth, controls the menstrual cycle, and restores the female reproductive system through phytoestrogen, a natural plant-based estrogen. It also helps manage hyperinsulinemia.

Satapushpa Churna: Satapushpa seeds are an effective PCOS supplement. They are a good source of phytoestrogens. Fennel's phytoestrogen concentration reduces insulin resistance and inflammation in PCOS. It is claimed to help reduce cellular imbalances that cause metabolic problems in PCOS.

Rajah Pravartani Vati: it is effective in artavikara, Hingu, Kumari, Tankan, and Kasina are the main ingredients of Rajah Praviriti Vati. These are vata and kapha dosha shaman drugs which increase the agneyaparna.

Aaroghyavardhini Vati: Aaroghyavardhini Vati affects rasa and rakta dhatus, promoting "prasadhaha raja nirmitee" (i.e., quality follicular development). It enhances liver activities and increases "kayagi" and "dhatwagni" secretions, resulting in decreased androgen production. Kutaki is a key component of Arogyavardhini vati, known for its pitta virechaka and subsequent rakta and Artavavah srotas sadihi happens.

Chandraprabha vati: This medication was mentioned in Pra meha Chikitsa. It can help with both Kapha and Vata dosa metabolic problems. It is beneficial in diabetes, tumors, cysts, and other conditions. Almost all medicines have hypoglycemic and hypcholesterolemic effect, which reduces the hyperinsulinemia that is the fundamental cause of the condition.

Dashumarishtha: It has been mentioned in the Sharangadhar Samhita regarding infertility. It comprises around 50 plants, including Dashamula, a set of 10 herb roots. Vatasyan mentions its therapeutic benefits. According to Ayurveda, Vata plays a vital part in the vitiation of all female-related illnesses. Dashumarishhta, therefore, plays an important part in the suppression of vata.

D) YOGA ASANAS IN PCOS
Recommended asanas for PCOS include:
- Bharadvajasana (Bharadvajasana twists)
- Badhakonasana (Butterfly pose)
- Chakki Chalanasana (Mill Churning Pose)
- Suptabadhakonasana (Reclined Bound Angle)
- Shavasana (Corpus posture)
- Padma Sadhana.
- A few rounds of Surya Namaskar (Sun Salutation).

Practicing these Asanas can enhance pelvic organ health, including the uterus and ovaries, as well as endocrine gland function.

The science of yoga addresses the core cause of PCOS, which is stress and obesity. Yoga can relieve stress and alleviate symptoms of PCOS.

1) Holding weight - bearing positions helps build muscle. Having more muscle mass can reduce insulin resistance, which is important for managing PCOS.

2) An energetic yoga practice raises heart rate, offering a cardiovascular exercise and helping in weight reduction.

3) Aasanas and pranayama enhance hormonal balance and deep relaxation, calming stressed-out PCOS brains and bodies.

4) Improves digestive organ function, addressing PCOS-related digestive issues.

E) PATHYA / APATHYA - AHARA 10 -
Pathya - Ahara - Yava, Amla, Priyangu and Shali, Shastika Rice.

Apathya - Ahara - Avoid foods like junk food, baked goods, Abhisheya aahara (Dahi, Udad, Kathal, etc.), Madhur Rasa Ahara (potatoes, sweets, and chocolates), etc.

Pathya / Apathya - vihara –
- Follow strictly with Ritucharya and Dincharya.
- Management of weight.
- Yogasan.

3. Discussion

Unnamed disease Doshha and Dushya should be understood and treated accordingly. PCOS cannot be correlated with single disease, few disease condition can be taken with similar signs and symptoms of PCOS.
They are,

Artava kshaya\textsuperscript{11} - Yadhochitakala, adarshana, delayed menstruation, and alpata. Alpata - scanty menstrual flow is one of the signs and symptoms of artava kshaya.

Nashtartava\textsuperscript{12} - Aavarana of dosha in artava marga, which leads to destruction of artava and manifests as ovulatory and menstrual disturbances.

Pushaghni jathaharini\textsuperscript{13} - Described under jataharinmis by Acharya Kashyapa, which means destruction of artava.

Grahati\textsuperscript{14} - Vitiated tridosha leads to vitiation in mamsa, medo dhatu to manifest vrustra unnata, vigrathasopaha inside the ovaries.

Vandhyya yoni vyapat\textsuperscript{15} - A condition in which there is nstaurtava, which is characterized by both anovulation and amenorrhea.

Rasavaha sroto dusti\textsuperscript{16} - Kapha prakopakara ahara - vihara cause Rasavaha sroto dusti, which leads to artava (upadhatu) and uttararoha dhatu.

Medovahasroto dusti\textsuperscript{17} - Manifestation of Prameha - poorvarupa like Atishshuyata and Garnthubhavha, which is seen in PCOS also. PCOS is found to be vata kapha vyadihi, along with the involvement of agni, rasa, rakta, mamsa, meda, asthi dhatu, and artava sroto dusti lakshana.

Possible method of action of Panchkarma in PCOS:

Vamana is highly efficient at removing vitiated Kapha. It is generally understood that Kapha aggravation may lead to obesity, which can then initiate the pathogenesis of PCOS; hence, pacifying Kapha using Vamana can help to restrict the advancement of PCOS. Also, Vamana acts on the thyroid and stimulates the pancreas, therefore maintaining normal hormone levels and decreasing the risk of PCOS. Virechana removes toxins, controls Pitta vitiation, and maintains the functioning of the hormonal system, hence helping in the management of disorders caused by hormonal imbalance.

Basti increases the quality of Artava by controlling Apan Vayu, which regulates menstruation, prevents dysmenorrhea, clears Artava Vaha Srotas, and decreases PCOS-related symptoms. Basti reduces obstructions in the way of Vata dosha, therefore reducing the pathogenic severity of female genital problems.

Possible method of action of Ayurvedic medicines in PCOS:

Ayurvedic medications have vatashamaka and srotopshodhana effects, as well as Gulmahara and Granthitiha qualities. These medications reduce the size of the cyst and restrict its development due to their Lekhana and Bhedana Guna. Similarly, Ayurvedic medications such as Laghu Guna, Tikta Rasa, and Usnha Virya help to regulate Kapha and Medha, relieving symptoms of an ovarian cyst. Kapha Medohara, Tridoshashamaka, and Vedana Sthapanam, and some, have properties that limit the development of cysts caused by Doshra vitiation. Raksha Guna Dravya inhibits excessive cell development, which restricts the creation of ovarian cysts.\textsuperscript{17 - 21}

4. Conclusion

In Ayurveda, direct correlation was not found in classical texts; hence, the sampripti or etiopathogenesis of PCOS in

Ayurvedic terms is postulated, and an attempt has been made to understand PCOS, which is caused by the vitiation of vata and kapha dosha. Among all dhatu, mamsa and medas dhatu show more vitiation in PCOS. Signs and symptoms can be correlated with anartva, nashtava, aarava kshaya, and vandhyya yonivyapat. Possible line of treatment in PCOD/PCOS - Potentiating Agni to increase nutritional supply Correction of aggravated Doshra, particularly Kapha and Vata. Correction of Aartava Dhatu Dusthi, or menstrual abnormalities. Correction of Meda Dhatu Dusthi to minimize excessive weight deposition. Remove Ama to eliminate the obstruction of Strotas Dusthi.

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