pharmacolitical Resonation Philosophical

WORLD JOURNAL OF PHARMACEUTICAL RESEARCH

SJIF Impact Factor 8.084

Volume 10, Issue 11, 2332-2343.

Review Article

ISSN 2277-7105

AYURVEDIC OVERVIEW OF PCOS; THE LEADING LIFESTYLE DISORDER

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Article Received on 21 July 2021,

Revised on 11 August 2021, Accepted on 31 August 2021 DOI: 10.20959/wjpr202111-21632

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Assistant Professor, Streerog and Prasutitantra Dept. R. A. Podar Medical (Ayurvedic) College, Worli, Mumbai. Stein and Leventhal were the first to describe polycystic ovarian syndrome (PCOS) more comprehensively in 1935,^[1] With varied clinical manifestations, unknown etiology, complex pathophysiology, and poor diagnosis. The diagnosis of PCOS remains a controversy in clinical endocrinology. In order to create an extensive and descriptive definition for the diagnosis of PCOS, the National Institutes of Health (NIH) criteria came into existence in 1990.^[2] Then, in 2003, a workshop in Rotterdam formulated a new diagnostic criterion named Rotterdam criteria.^[3] This criterion requires the presence of two conditions out of the three: (1) oligomenorrhea/anovulation, (2) clinical/biochemical hyperandrogenism, and (3) polycystic ovaries

(≥12 follicles in each ovary measuring 2–9 mm). In 2006, the Androgen Excess Society (AES) revised the diagnostic criteria. The AES requires the specific presence of clinical/biochemical hyperandrogenism in combination with either oligomenorrhea, anovulation or polycystic ovaries.

The syndrome has gained much attention as a result of its high prevalence and possible metabolic, reproductive and cardiovascular disturbances. There are few studies conducted in India. Studies done in south India and Maharashtra, prevalence of PCOS (by Rotterdam's criteria) were reported as 9.13% and 22.5% (10.7% by Androgen Excess Society criteria) respectively.^[4]

In the past era, polycystic ovary has been looked at primarily as an endocrine disorder but now research shows that this syndrome spans the lives of women affecting them from inutero life until death, leading to several health risks that can impair quality of life. But several aspects of PCOS remain unclear, in deficit of solid evidence, the underlying pathogenic mechanism is not understood fully, the clinical manifestations may be diverse among the patients or evolve over time and the long-term consequences are not clarified conclusively. It is the best known and most extensively studied cause of anovulatory infertility in reproductive-aged women.

In the present scenario of westernization, the sedentary lifestyle and westernized food habits adopted have contributed to the progression of disease.

Modern medical intervention of PCOS mainly includes hormonal, anti-diabetic all having adverse side effects. Surgical drilling has temporary effect. Hence there is need of efficient and easily assessable drug which will be free from adverse effects and drug interactions seen in above mentioned drugs and will treat the cause of PCOS.

Ayurveda, the ancient system of Indian medicine mainly aims at "Swasthasya swasthya rakshanam aturasya vikaara prashmanam" which means the treatment of the diseases as well as maintenance of the health. PCOS is an emerging health problem during adolescence which needs to be understood as per Ayurveda. It has to evolve as a mainstream of medicine in dealing such emerging health problems like PCOS without any adverse effects.

The condition PCOS, it cannot be correlate as a single disease, but the symptoms resemble to the features which are mentioned in various contexts in *Ayurvedic* classics under various headings as *Anartava*, *Nashtartava*, *Artava Kshaya*, *Vandhya Yonivyapat*, *Pushpaghni Jataharini*, *Granthibhootha artavadushti*, *Srotodushti* and *Santarpanottha Nidana* can be to some extent compared with the symptoms of Polycystic ovarian syndrome which needs to be analysed as per *Ayurvedic* parlance.

Artava Nirukti

अमरकोश :- Three names given for Streeraja, :-स्याद्रजः पुष्पमार्तवं |[5]

1. रजः- रज्यतेऽनेन 'भूरञ्जिभ्यां कित' इत्यस्न । रज: क्लीबं ग्णान्तरे ।

Here, raja means which stains anything.

2. आर्तवः- आर्तवे च परागे च रेणुमात्रे च दृश्यते ।

Here Artava means ovum.

3. पुष्प :- पुष्प्यते । पुष्प विकसने ।

Pushpa which undergoes in process of folliculogenesis.

4. ऋत्रेव प्रज्ञाद्यण।

The secretion which comes out according to Rutukala.

Artava Paribhasha: The term artava can be defined as [6]

मासि मासि रजः स्त्रीणां रसजं स्रवतित्र्यहम् । अ. ह. शा. १/७

The substance which is formed from *Rasa* and flows out of the body in each month for 3 days is called as *Rajah*.

Acharya Sushruta mentioned that over entire month, artava is collected through dhamanis in garbhashaya, this slight blackish artava having specific odour is brought to yoni mukh by vayu.

मासेनोपचितं काले धमनीभ्यां तादार्तवम्

ईषत्कृष्णं विवर्ण च वायुर्योनिमुखं नयेत् $\|^{[7]}$ सु. शा. 3/10

- Acharya Kashyap mentioned that visarjan of raja is done by rajavaha sira, it takes the form of Pushpa (i.e. becomes Pushpibhuta) & its Pravartana occurs every month. The process of pravartana is under the control of Apana vayu as described in the prakrita karma of apana vayu.

रजोवहा : सिरा यस्मिन् रजः प्रविसृजन्त्य्तः ।

पुष्पभूतं हि तदैद्वान्मासि मासि प्रवर्तते ॥ .का. खि.९-17

Rajodarshan-kala

तत्वर्षात् द्वादशाद्र्ध्वं याति पञ्चाशतः क्षयम् $\parallel^{[8]}$.स्. सू. 14/6

According to *Acharya Sushruta* as well as *Vagbhata*, *Rajodarshan* starts from the age of approximately 12 years and ceases at the age of 50 years.

Artava pramana

According to *charak* and *Vagbhata Samhita*, the quantity of *Artava* is as follows

Artava:- 4 anjali

Antah-fala- 2 bindu

Artava Srava Kala^[9]

Duration of menstrual bleeding is called *Artava Srava Kala*. It varies with individuals. There is difference of opinion regarding to the duration of menstruation.

The different opinions related to Artava Srava Kala are as follows:

Ashtang sangrah, Ashtang hriday, sushrut, dalhan, bhavprakash	3 days
Charak samhita, Madhav nidan	5 days
Harita samhita, Bhel samhita	7 days

According to above references maximum duration of *Artava kala* is 7 days, average being 5 days, and minimum 3 days. If the *Artava Srava Kala* is less than 3 days and more than 7 days it may taken as abnormal.

Stages Artava Chakra

The whole Artava Chakra of 1 month is divided into three phases;

Avastha	Raja swarup	Kala	Predominant dosha
Rajaswala	Mala-rupa raja	3-5 days	Vata
Rutumati	Prasad-rupa raja	12-16 days	Kapha
Rutuvyatita	Puran raja	Up to the next rajodarshan	Pitta

Shuddhaartava Lakshana^[10]

मासान्निष्टिछदाहार्ति पंचरात्रान्बंधि च ।

नैवातिबह् नात्यल्पमार्तवं शुद्धमादिशेत॥

गुंजाफल सवर्णम् च पद्मालक्तकसन्निभम् ।

इंद्रगोप संकाशमार्तवं शुद्धमादिशेत ॥ .च.चि. ३०/ २२५-२२६

According to *Acharya Charaka*, the characteristics of the normal menstrual blood is that which possess the colour as that of *Gunjaphala*, *Padma*, *Indragopa* and *Alaktaka*.

Panchabhautika sanghatana

According to Sushruta Samhita, the Artava is Agneya i.e., Agni mahabhuta Pradhan.

...... आर्तवमाग्नेयम ॥

Artavavaha Srotas^[11]

आर्तववहे दवे तयोर्म्लं गर्भाशय आर्तववाहिन्यश्च धमन्यः।

तत्र विद्धायां मैथुनासाहिष्णुत्वम् आर्तवनाशश्च ॥ ..स्.शा. ९/12

The *Artavavaha srotas* are two in number having their *moola-sthan* being *Garbhashay* and *Artavavahi dhamani's*. Any injury to this *artavavaha srotas* produces *Vandhyatva*, *Maithunasahishnutwa* and *Artavanasha*. (Su. Sha. 9/12)

DISEASE REVIEW

Granthibhoot artav^[12]

अत्र दोषाः कफोवायुः वातकफ च । सु.शा. २ / २१

The symptoms of PCOS can be correlated with *granthibhoot artava*, described by *Aacharya Sushrut*.

Aartavkshaya^[13]

आर्तवक्षये यथोचितकालदर्शमल्पता वा योनिवेदना च | स्.स्. १५/१२

A condition in which the menstruation does not appear in it's appropriate time or is delayed or intermenstrual period is prolonged as well as the quantity of menstrual flow is reduced or scanty, can be correlated with symptoms of PCOS.

Charak samhita

"Central obesity; a symptom of PCOS find its similarity with *sthoulya*, a *santarpanottha vikara* mentioned by *Aacharya Charak* in *ch.su*.23/4., as the *sthanas* of *medsanchay* are *kati*, *Sakthi* etc.

Kashyap samhita^[14]

वृथा पुष्पं तु या नारी यथाकालं प्रणश्यति ।

स्थुललोमशगण्डा वा पुष्पघ्नी साऽपि रेवती || का.क.६. रेवती

The symptoms of PCOS can be correlated with pushpaghni jatiharini mentioned by kashyap.

Bhavprakash^[15]

वंध्या निरार्तवा ज्ञेया । भा. प्र.चि. ७०/६, ७

In vandhya yoni, the artava is destroyed. So it can be correlated with amenorrhoea.

Arajaska yonivyapad^[16]

अरजस्का इति अनार्तवा | चक्रपाणी

Aacharya chakrapani adds anartava as symptom. This description seems to be of amenorrhoea because of systemic disorders, where absence of menstruation because of decreased body fat which is necessary for normal menstrual function.

Alpartava

"Bhel samhita there is a description about Alpartava and Vikrit artava in sharirsthan 5th chapter, Sharirvichaya adhyaya.

DRUG REVIEW

Contents of *Rajapravartak choorna* mentioned in *Rasatantrasar va Siddhaprayogsangrah* pratham khand, are as follows:^[17]

Hingu: - 3 mashe

Shunthi, Marich, pippali, Bharangi: - each 8 mashe

Anupan :- Bramhi and krishna tila kwath.

Hingu^[18]

हिंग्ष्णं पाचनं रुच्यं तीक्ष्णं वातबलासहत् ।स्त्रीप्ष्पजननं बल्यं मूर्च्छापस्मारहत् परम् ॥

In haritakyadi varg, bhavprakash mentioned pachan vatakaphaghna and streepushpajanaj properties of hingu.

हिंग्निर्यासछेदनीयदीपनीय अन्लोमिकवातकफप्रशमनानाम्।"

Aacharya Charak mentioned the properties of hingu as, deepan Vatakaphashamak.

Shunthi^[19]

श्ण्ठी रुच्यामवातघ्नी पाचनी कट्का लघ्ः | स्निग्धोष्णा मध्रा पाके कफवातविबन्धन्त् ।।

Bhavprakash in haritakyadi varg mentioned shunthi, with katu ras and ushna veerya it has pachaniya, vatkaphaghna properties.

स्निम्धोष्णा कट्का श्ण्ठी वृष्या शोफकफारूचीन्।

Rajnighantu explained the shunthi as, vrishya, shothahar, kaphaghna in shatapushpadi varg.

Maricha^[20]

नात्यर्थमुष्णं मरिचमवृष्यं लघु रोचनम् ।छेदित्वाच्छोषणत्वाच्च दीपनं कफवातजित्॥

Chedaniya, deepaniya, laghu properties of maricha are mentioned in Charak Sutrasthan Also Bhavprakash mentioned the properties of maricha as

मरिचं कट्कं तीक्ष्णं दीपनं कफवातजित्।

Pippali^[21]

पिप्पलीम्लं दीपनीय पाचनीय आनाहप्रशमनानाम् |

Aacharya Charak mentioned the properties of Pippali as, deepan pachan.

Also the Aacharya Sushruta,

शुष्का कफानिलघ्नी सा वृष्या पित्ताविरोधिनी |

Bharangi^[22]

रुक्षा कटु - तिक्ता रुच्योष्णा पाचनी लघुः ।दीपनी तुवरा गुल्मरक्तजिन्नाशयेत् ध्वम् ॥

According to *Bhavprakash*, *Bharangi* with *katu tikta rasa* has the properties of *deepan*, *pachan* and also the *kaphavatghna* and *anulomak*.

Bramhi^[23]

ब्राम्ही तिक्तरसोष्णा च सरा वातामशोफजित्

Raj nighantu mentioned bramhi, tikta rasaand ushna veerya helps in pachan, vatashaman anuloman. Also bramhi included in medhya varg and parjasthapak gan.

Krishna tila^[24]

कषायान्रसं स्वाद् सूक्ष्मम्ष्णं व्यवायि च ।वातघ्नेष्तमं बल्यं त्वच्यं मेधाग्निवर्धनम् ॥

Aacharya Charak mentioned properties of til as a.ushna, vataghna balya.

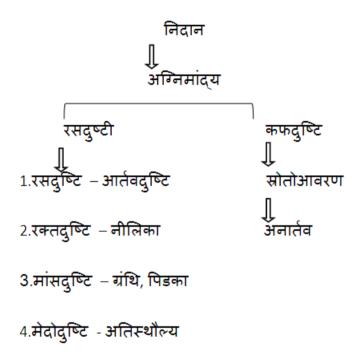
World Journal of Pharmaceutical Research

	Hingu	Shunthi	Maricha	Pippali	Bharangi	Bramhi	Krishna tila
Latin name, family	Ferula narthex, Umbelliferae	Zingibar officinale, Zingiberaceae	Piper nigrum, Piperacae	Piper longum, Piperacae	Clerodendum serratum, Verbenaceae	Bacopa monniei, Plantaginaceae	Sesamum indicum, Pedaliaceae
Chemical content	Asaresinotanol, Asafoetidin	Gingerol, Geraniol	Piperene, beta- caryophyllene	Piperene, piplartine	Saponin	Bramhin, herpestin	Sesamine
Prayojyanga	Niryasa	Kanda	Phal	Mool	Mool	Panchang	Beej
Rasa	Katu	Katu	Katu	Katu	Tikta, katu	Tikta	Madhur, kashay, tikta
Veerya	Ushna	Ushna	Ushna	Anushna	Ushna	Ushna	Ushna
Vipak	Katu	Madhur	Madhur	Madhur	Katu	Katu	Madhur
Guna	Sara	Laghu, Snigdha	Guru, tikshna, ruksha	Laghu, snigdha	Laghu, ruksha	Laghu	Guru, snigdha
Karma	Vatakaphaghna, vajikarn, aartavajanan, Garbhashayashodhan	Vatakaphaghna, uttejak, Vrishya.	Vatakaphaghna, deepan, pachan, vatanuloman, aartavajanan	Vatakaphashamk, medhya, deepan, vrishya, garbhashaysamkochak	Vatakaphaghna, deepan, pachan, raktashodhak	Medhya, prajasthapan, aartavajanan, anulomak	Vatashamak, yogvahi, medhya, aartavajanan

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Samprapti

Santarpanottha nidana sevana leads to agnimandyaagnimandya. Because of which there is improper digestion leading to the ama annarasa. This leads to dhatvagnimandya which hampers the formation of dooshita rasa dhatu which circulates within body. Due to the madhuratara and the ati-snigdha property of rasa dhatu, having close affinity to the medo dhatu vitiates it. Thus, there is increase in the medo dhatu leading to ati sthoulya, and also because of the avarana to other srotas caused by kapha dosha there is no proper formation of other dhatus (Su. Su. 15/37).



Flow chart- Showing Samprapti of PCOS based on Ayurvedic Parlance.

Samprapti Ghataka

Dosha: Kapha, Vata

Dushya: Rasa, Rakta, Mamsa, Meda, Asthi

Srotas: Rasavaha, Raktavaha, Mamsavaha, Medovaha, Asthivaha, Artavavaha

Rogamarga: Abhyantara

Adhishtana: Garbhashaya, Phalakosha

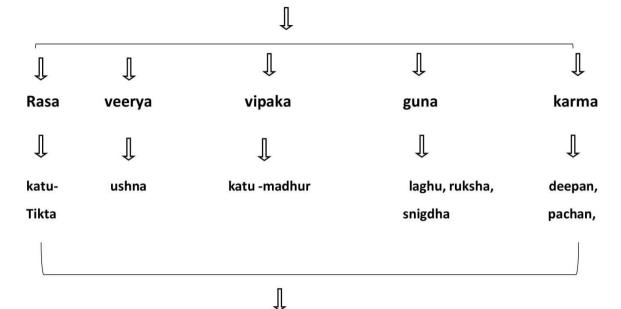
Vyaktasthana: Sarvasharira

Udbhavasthana: Amapakvashaya

Dushti prakara: Sanga, Atipravrutti and Granthi

Agni: Jatharagni and Dhatwagni

Probable action of Rajapravartak choorna:-



Deepan, Aampachan, Srotos-shodhan, vatakaphaghna, vatanulomak, agnideepak



Removes sang and aavaran in utpatti and vyakti sthan



Regulation of aartavapravritti, aartava being updhatu of rasa



So, as to bring out *samprapti-bhedan*, *Rajapravartak choorna* has all the properties.

Dose

2 to 3 gms of choorna with kwath of bramhi-krishna tila.

Duration

Before 10 days from expected date of menstruation for 4 to 6 months.

CONCLUSION

In conclusion, *samprapti* of PCOS according to *Ayurveda* includes *agnimandya*, *rajodushti*, *ashtartavdushti*, *srotorodh*, *rasadhatudushti*. The *Rajapravartak choorna*, mentioned in *Rasatantrasar* has properties which brings out *samprapti bhedan* such as, *deepan*, *pachan*,

vatakaphashamak, srotoshodhan, aartavajanan, medhya, vrishya. These properties will help in relieving the symptoms of PCOS.

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