



Review Article

AN EFFORT TO UNDERSTAND PCOS IN AYURVEDA CONTEXT**Priyanka Sharma^{1*}, Upasana Sharma², Sushila Sharma³**¹Ph.D. Scholar, ²Associate Professor & H.O.D. Dept. of Prasuti and Streeroga, N.I.A. Jaipur, Rajasthan, India.²Ayurvedic Medical Officer, Dept. of Ayurveda, Govt. of Rajasthan, India.**KEYWORDS:** PCOS, *Aartva*,
Bandhya *Yonivyapada*,
Treatment.**ABSTRACT**

PCOS (Poly Cystic Ovarian Syndrome) is probably fastest growing health hazard amongst women of reproductive age. The prevalence of this disease in general population is about 5-10% world-wide where as relatively high prevalence in Indian subcontinent (52%). It is characterized by a combination of hyperandrogenism (clinical or biochemical), chronic anovulation and polycystic ovaries. This is frequently associated with insulin resistance and obesity. 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 into its relation with *Aartvadushti*. PCOS can be better understood with the help of three basic principles given by *Acharya Charak: Vikarprakriti, Adhistanantara, Samutthanvishesha*. Maximum congruence of PCOS can be established with *Bandhya Yonivyapada*. An attempt is made to understand *Nashtartva* which is the cardinal feature of *Bandhya*. Word *Aartava* has been used extensively in *Samhita* in context of menstrual blood, ovum and ovarian hormones. Therefore Amenorrhoea, anovulation, hormonal dysfunction are considered exposed manifestations of *Nashtartva*. Possible line of treatment is stipulated with *Nidanaparivarjan, Samshodhana, Aaganeya Dravya, Savayonivardhana Dravya*.

Address for correspondence*Dr Priyanka Sharma**

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PCOS is probably fastest growing health hazard amongst women of reproductive age. The prevalence of this disease in general population is about 5-10% world-wide. This familial disorder appears to be inherited as a complex genetic trait.^[1] The association of amenorrhoea with bilateral polycystic ovaries and obesity was first described by Stein & Leventhal. It is characterized by a combination of hyperandrogenism (clinical or biochemical), chronic anovulation and polycystic ovaries. This is frequently associated with insulin resistance and obesity.^[2] This condition is receiving so much attention due to its high prevalence and possible reproductive, metabolic, and cardiovascular consequences. It is the most common cause of hyperandrogenism, hirsutism, and anovulatory infertility in developed countries.^[3]

As the aetiology is poorly understood, there is controversy about diagnostic criteria, clinical features of the syndrome. 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]

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 into relation with *Aartvadushti*. We know that most gynaecological disorders come under the heading of *Yonivyapada*.^[5]

According to *Ayurveda*, disease should be examined by fivefold examination system (*Nidanpanchaka*).^[6] None of *Yonivyapada* and *Aartvadushti* is described in these five aspects; there is description about *Nidana* and *Chikitsa* only. In the same way, all the abnormalities associated with PCOS should be seen as different pathological conditions of *Dosha, Dushya, Roga Adhithana*. Only the variation in these constituents results variation in onset and symptoms of the disease.

Aims and Objectives

- To study aetiopathogenesis of polycystic ovarian syndrome and establish its Ayurveda congruence.
- To evaluate symptomatology of PCOS w.s.r.to Ayurveda symptoms.
- To find out possible line of treatment of disease in Ayurveda texts.

Materials 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.

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* & *Aartvadoshti* is essential. *Acharya Sushruta* described *Bandhya Yonivyapada* whose main feature is *Nashtartava*.^[7] After description of eight disorder of *Aartva*, *Nashtartava* has been given by *Acharya Sushrut* separately also. In this condition *Artava* is not totally destroyed but it is not evident due to obstruction of its channels. He says the passage is encircled by *Vata* and *Kapha* and ultimately results in amenorrhoea.^[8] Word *Aartava* has been used extensively in *Samhita* in context of menstrual blood, ovum and ovarian hormones.

- If we interpret word *Artava* with menstrual blood, in *Nastartava* due to obstruction of *Artavavahastotasa* by *Vata* and *Kapha Dosh*, passage of *Aartava* carrying channels is obstructed. So *Aartava* is not apparent monthly as in normal menstrual cycle bleeding which results in amenorrhoea.
- Ovum is a microscopic structure. Its presence in our texts was imagined by its role in conception. If we say *Aartava* refers to ovum then we can consider *Nastartarva* as anovulatory cycles which causes infertility. Keeping this in view, we can consider *Bandhya* as female with anovulatory cycle in whom menstrual flow may be normal or not. This condition is seen in PCOS as 30% of women with PCOS have normal menses.^[9]
- If *Aartava* is taken as ovarian hormones, the basic pathology of PCOS in context of *Avaranaby Dosh* can be understood. This *Avarna* distrupts homeostasis of HPO axis causing hormonal imbalance leading to PCOS.

Nidana (causative factors) ^[10]

PCOS is functional disorder of unclear aetiology and as such, is a diagnosis of exclusion with other androgen and ovulatory disorder of clearly defined aetiologies. We can correlate PCOS with *Bandhya Yonivyapada* and *Nashtartava*. As in our classics no specific etiology is described, so general causative factors for *Yonivyapada* can be considered as etiological factors:

1. **Mithyachara:** Under this heading we can include *Mithyaahara* (faulty dietary habits) *Mithyavihar* (abnormal life style) both. In PCOS under the heading of abnormal diet we can include pizza, burger, bread, cold drinks, spicy, oily, junk food consumption. Abnormal life style may be faulty habits of sleep (*Diwaswapna*, *Ratrijagrana*), stress, competition pressure and other *Mansikbhawa* like *Irshya*, *Krodh*, *Dwesh*. We can see that all these are also causative factors for obesity, which play a very important role in appearance of this particular disease also.^[11]
2. **Pradushtartava:** The word *Aartva* should be regard for ovarian hormones. As menstrual blood is a result of cyclic endometrial shedding under the influence of various hormones of HPO axis. In patients with PCOS ovarian compartment is the biggest contributor of androgens. Dysregulation of CYP 17, the androgen forming enzyme in both adrenals and ovaries may be

the central pathologic mechanism underlying Hyperandrogenism in PCOS.

3. **Bijadosha:** Various chromosomal and genetic abnormality comes under this heading. Its genetic origins are likely polygenic and/or multifactorial.^[12] This is complex multigenic disorder that results from the interaction between multiple genetic and environmental factors. A high prevalence of PCOS or its features among first degree relatives is suggestive of genetic influences.^[13]
4. **Daiva:** Unknown or idiopathic causes comes under this heading. Each cause has its own causative process, potential and mode of action.

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%).^[14]
- Hirsutism is a common clinical presentation of hyperandrogenism occurring in up to 70% of women with PCOS.^[15]
- Acne can also be a marker of hyperandrogenism, approximately 15-30% of women presents this feature.^[16]
- PCOS is the commonest cause of anovulatory infertility 40%.^[17]

Diagnostic criteria

- In 1990 NIH sponsored PCOS conference, diagnostic criteria was formulated. It was based on consensus rather than clinical trial evidence. Their diagnostic criteria recommended clinical and/or biochemical evidence of Hyperandrogenism, chronic anovulation and exclusion of other known disorders.^[18]
- According to Androgen Excess Society (AES), PCOS should be considered a disorder of androgen excess and the NIH criteria should be used.^[19]
- This criteria was revised by Rotterdam European Society for Human Reproduction/American Society of Reproductive Medicine (ASRM) sponsored PCOS consensus workshop group in 2003, where the following criteria were established: oligo/amenorrhoea, hyperandrogenism (clinical or biochemical) and sonographical appearance of polycystic ovaries.^[20] [The sonographic criteria for PCOS requires the presence of 12 or more follicles in either ovary measuring 2-9mm in diameter and /or increased volume >10cc.] Two out of three are required for diagnosis.

Acharya Charaka has mentioned in *Sutra sathana* 18/42-45 that there are *Aparisankheya* (uncountable) diseases on the basis of *Ruja*, *Varna*, *Samuthan*, *Sathan*, *Sansthan*.^[21] It is not necessary all the time that a disease will have all symptoms. So one should not hesitate to consider and treat unnamed disease.^[22]

All the abnormalities associated with PCOS can be seen in different pathological conditions of *Dosh*s,

Dushya, Agni. So only the variation in combination of these constituents, results variation of the disease in onset, symptoms, aetiology. These pathologies should be studied under three parameters.^[23]

1. *Vikaraprakriti* (Disease and its prominent constituents)- Amenorrhoea or oligomenorrhoea, continues bleeding after a certain period of amenorrhoea.
2. *Adhishthanantara* (Variation in the site of disease)- Ovary, Skin.
3. *Samuthanvishesha* (Specific onset of the disease with specific aetiology)- previously mentioned *Nidana* of *Yonivyapda* manifest the disease.

These parameters can play a very important role to get the knowledge of disease.

Possible line of treatment

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.

Treatment in Ayurveda for PCOS should be planned with following considerations:

Nidanparivarjana

Eradication of causative factors is foremost treatment of any disease. Faulty dietary habits should be corrected. Intake of *Mithaya Aahara* like pizza, burger and cold drinks should be strictly stopped. Abnormal life style should be corrected. Daily exercise, practise of *Yoga Pranayama* will help in weight reduction as well as in hormonal regulation.

Samshodhana^[24]

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 Dalhan* says that for purification only *Vamana* should be used, not *Virechana*. As *Virechana* reduces *Pitta* which results in *Aartvakashya*. *Vamana* removes *Saumaya (Kapha)* substance resulting in relative increase of *Aagneya* constituent of body, consequently *Aartva* increases. *Acharya Chakrapani* says that use of both purification measures clears upward and downward channel respectively. So both procedures should be done.

Agneyadravya

Aartva is *Aagneya* in nature. *Aagneya Dravya* is said to be having *Vata, Kapha Shamaka* and *Pita Prakopaka* properties. *Aagneya Dravya* causes increase in amount of *Aartva* and also helps in removal of *Kapha and Vata Aavarna* and cure the disease.

Swavonivardhandravaya

Here *Swayoni-varhdhana* means those measures which are help for *Aartava-Vridhi*. Administration of

Dravyas like *Tila, Kulatha* is advisable as same *Guna Dravya* increases *Pramana* of *Aartava*.^[25]

Classical Formulations

1. *Kanchnara Guggulu*
2. *Pushpadhanva Rasa*
3. *Nashtapushpantaka Rasa*
4. *Rajah Pravartani Vati*
5. *Aarogyavardhini Vati*
6. *Chaturbeeja Choorna*
7. *Varunadi Kashaya*

Some Research articles findings

1. *Yogbasti (Tila Taila and Dashmoola Kwatha)* along with *Rajapravartni Vati, Pushpadhnva Rasa and Phalagrita* orally had caused significant improvement in patients of PCOS.^[26]
2. Sub fertility due to Poly Cystic Ovarian Syndrome can be cured successfully by using Ayurveda treatment regimen i.e. first stage with *Triphla Kwatha, Chandraprabha Vati, Manibhadra Churna*; second stage with *Shatavari, Shatapushpa* and *Guduchi* along with *Krishna Jeeraka Kwatha*; powder of *Atibala, Shatapushpa* along with *Rasayana Kalpa*.^[27]
3. Significant results were found by treating patients of PCOS with *Yoga Basti (TilaTaila and Dashmool Kwatha)* and *Uttarbasti* along with oral dugs like *Ashoka, Manjistha* etc.^[28]
4. Daily yoga for 30 minutes with 4 *Asanas*, 4 *Pranayama*, meditation and *Shavasana* helps in weight reduction and stress management which ultimately stabilize the normal function of hypothalmo- pituitary - ovarian axis and cure PCOS.^[29]

CONCLUSION

It is good idea to wind up this article with such understanding of PCOS in *Ayurveda* pretext. Better understanding of any disease enables physician to treat it more efficiently. PCOS not explained vis-a-vis in *Samhita* but *Aacharya* 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, Bandhyayonivyapada* shows maximum congruence with PCOS. Expanded meanings of *Aartava* i.e. menstrual blood, ovum and hormones help to elaborate PCOS symptomatology in *Ayurveda* context and plan its line of treatment.

REFERENCES

1. Ehrmann DA. Polycystic ovarian syndrome. *N Engl j med* 2005;352:1223-1236.
2. Toulis KA, Goulis DG, Kolibianakis EM et al. risk of gestational diabetes mellitus in woman with polycystic ovarian syndrome: a systematic review and meta- analysis *Fertil Steril* 2009;92:667-677.
3. Practice committee of the American society of reproductive medicine. the evaluation of androgen excess *Fertil Steril* 2006;86:s173-s180.
4. Kaushal R, Parchure N, Bano G, et.al Insulin resistance and endothelial dysfunction in the brothers of Indian subcontinent Asian woman with

- polycystic ovaries, *Clinical endocrinology*, 2004; 60: 322-328.
5. Charaka Samhita II, Comm. Shri Satyanarayan Shastri with vidyotini Hindi commentary by Pt.Kashinath Shastri & Dr.Gorakhnath Chaturvedi, Published by Chaukhamba Bharti Academy, Varanasi, pp-841.
 6. Charaka Samhita- I, Comm. Shri Satyanarayan Shastri with vidyotini Hindi commentary by Pt.Kashinath Shastri & Dr.Gorakhnath Chaturvedi, Published by Chaukhamba Bharti Academy, Varanasi, pp-601.
 7. Sushruta Samhita of Mahrshi Sushruta edited with Ayurveda-Tattva-Sandipika Hindi Commentary by Kaviraja Ambikadutta Shastri, Reprint edition, 2014, Vol.II publisher: Chaukhambha Bharti Academy, Varanasi, pp-202.
 8. Sushruta Samhita of Mahrshi Sushruta edited with Ayurveda-Tattva-Sandipika Hindi Commentary by Kaviraja Ambikadutta Shastri, Reprint edition, 2014, Vol.I Sharira sthana publisher: Chaukhambha Bharti Academy, Varanasi, pp-16.
 9. Balen A, Conway G, Kaltsas G. Polycystic ovary syndrome: the spectrum of the disorder in 1741 patients. *Hum Reprod*. 1995;10:2107-2111.
 10. Charaka Samhita II, Comm. Shri Satyanarayan Shastri with vidyotini hindi commentary by Pt. Kashinath Shastri & Dr.Gorakhnath Chaturvedi, Published by Chaukhamba Bharti Academy, Varanasi, pp-841.
 11. Alvarez-Blasco F, Botella-Carretero JI, San Millan JL, Escobar-Morreale H. Prevalence and characteristics of the polycystic ovary syndrome in overweight and obese women. *Arch Intern Med*. 2006;166:2081-2086.
 12. Crosignani PG, Nicolosi AE. Polycystic ovarian disease: heritability and heterogeneity. *Hum Reprod Update*. 2001;7(1):3-7.
 13. Amato P, Simpson JL. The genetics of polycystic ovary syndrome. *Best Pract Res Clin Obstet Gynaecol*. 2004;18(5):707-718.
 14. Hart R. Definitions, prevalence and symptoms of polycystic ovaries and the polycystic ovary syndrome. In: Allahbadia GN, Agrawal R, editors. *Polycystic Ovary Syndrome*. Kent, UK: Anshan, Ltd; 2007:15-26.
 15. Azziz R, Sanchez L, Knochenhauer ES, et al. Androgen excess in women: experience with over 1000 consecutive patients. *J Clin Endocrinol Metab*. 2004;89(2):453-462.
 16. Wijeyaratne CN, Balen AH, Barth JH, Belchetz PE. Clinical manifestations and insulin resistance (IR) in polycystic ovary syndrome (PCOS) among south Asians and Caucasians: is there a difference? *Clin Endocrinol (Oxf)*. 2002;57:343-350.
 17. Teede H, Deeks A, Moran L. Polycystic ovary syndrome: a complex condition with psychological, reproductive and metabolic manifestations that impacts on health across the lifespan. *BMC Med*. 2010;8:41.
 18. Zawadski JK, Dunaif A. Diagnostic criteria for polycystic ovary syndrome. In: Givens JHF, Merriman G, editors. *The Polycystic Ovary Syndrome*. Cambridge, MA: Blackwell Scientific; 1992:377-384.
 19. Azziz R, Carmina E, De Wailly D, et al. Position statement: criteria for defining polycystic ovary syndrome as a predominantly hyper androgenic syndrome: an Androgen Excess Society guideline. *J Clin Endocrinol Metab*. 2006;91:4237-4245.
 20. Rotterdam ESHRE/ASRM-Sponsored PCOS Consensus Workshop Group. Revised 2003 consensus on diagnostic criteria and long-term health risks related to polycystic ovary syndrome. *Fertil Steril*. 2004;81:19-25.
 21. Charaka Samhita- I, Comm. Shri Satyanarayan Shastri with vidyotini hindi commentary by Pt.Kashinath Shastri & Dr.Gorakhnath Chaturvedi, Published by Chaukhamba Bharti Academy, Varanasi, pp-383.
 22. Charaka Samhita- I, Comm. Shri Satyanarayan Shastri with vidyotini hindi commentary by Pt.Kashinath Shastri & Dr. Gorakhnath Chaturvedi, Published by Chaukhamba Bharti Academy, Varanasi, pp-383.
 23. Charaka Samhita- I, Comm. Shri Satyanarayan Shastri with vidyotini Hindi commentary by Pt.Kashinath Shastri & Dr.Gorakhnath Chaturvedi, Published by Chaukhamba Bharti Academy, Varanasi, pp-383.
 24. Sushruta Samhita of Mahrshi Sushruta edited with Ayurveda-Tattva-Sandipika Hindi Commentary by Kaviraja Ambikadutta Shastri, Reprint edition, 2014, Vol.I Sutra Stahana publisher: Chaukhambha Bharti Academy, Varanasi, pp-77.
 25. Charaka Samhita- I, Comm. Shri Satyanarayan Shastri with Vidyotini Hindi commentary by Pt.Kashinath Shastri & Dr.Gorakhnath Chaturvedi, Published by Chaukhamba Bharti Academy, Varanasi, pp-244.
 26. Khot Bhagyashri et.al. A clinical study to evaluate the efficacy of yogbasti and yogbasti with herbo mineral compounds in the management of pcos. *World Journal of Pharmaceutical Research* Volume 4, Issue 8, 1634-1640.
 27. Siriwardene et. al. Ayurveda treatment in Sub fertility with PCOS. *AYU Jan-Mar 2010 Vol 31 Issue 1* pp 24-27.
 28. Khot Bhagyashri et. al. Clinical efficacy of Ayurveda treatment on polycystic ovarian syndrome. *Journal of pharmacy vol 3 issue 3* pp21-25.
 29. Anjali Verma et. al. Management of PCOS: A Psychosomatic Disorder by Yoga Practice. *International journal of innovative research and development* Vol 4 issue 1 pp216-219.

Cite this article as:

Priyanka Sharma, Upasana Sharma, Sushila Sharma. An Effort to Understand PCOS in Ayurveda Context. *AYUSHDHARA*, 2016;3(2):630-633.

Source of support: Nil, Conflict of interest: None Declared