

# Role of Rasayana in Female Infertility in Relation with PCOS

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**Abstract**— Polycystic ovarian syndrome (PCOS) is the most common, yet complex endocrine disorder affecting women in their reproductive years and is a leading cause of infertility. The prevalence of PCOS is increasing with most women impacted falling in the 20-30 years age group which is estimated to be 5-10% women in general population who are undergoing nutritional transitions due to westernized diets and lifestyle. The pathophysiology of PCOS involves multisystemic dysfunction; namely reproduction, endocrine, and metabolic. The symptoms of PCOS vary from person to person. They could range from irregular menstruation, hirsutism, obesity and hair loss in some cases and long term can lead to complications. This syndrome cannot be included under any particular condition in specific and can be correlated in Ayurveda with artavakshaya, anartava and pushpagnijataharinibased on its lakshanas, which are vatakaphapradhana rasa pradoshajavyadhi. In this condition adopting vatakaphahara and pitta vridhikaraaharavihara, proper shodhana and rasayana karma along with life style modification can control the onset and further progression of the disease. So in the present context, an attempt is made to explain the role of rasayana in female infertility in relation with PCOS.

**Keywords**— PCOS, Artavakshaya, Anartava, Pushpagnijataharani, Rasayanas.

## I. INTRODUCTION

Polycystic ovarian syndrome (PCOS) is the most common endocrinopathy in women in their reproductive age and is a leading cause of infertility. The prevalence of PCOS is more in 20-30 years age group.<sup>1</sup> In India 1 in 5 women are affected with PCOS. It is estimated that 5-10% women in general population are affected who are undergoing nutritional transitions due to westernized diets and lifestyle. It is characterised by a combination of hyper- androgenism either clinical or biochemical, chronic anovulation and polycystic ovaries, and it is frequently associated with insulin resistance and obesity. The syndrome has gained much attention as a result of its high prevalence, and possible metabolic, reproductive and cardiovascular disturbances. Despite that 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 longterm consequences are not clarified conclusively. It is the best known and most extensively studied cause of anovulatory infertility in reproductive-aged women. As per Ayurvedic parlance this syndrome cannot be included under any particular condition in specific and can be correlated with artavakshaya, anartava and pushpagnijataharini based on its lakshanas, which are vatakaphapradhana rasa pradoshajavyadhi. In this condition adopting vatakaphahara and pitta vridhikaraaharavihara, proper shodhana and rasayana karma along with life style modification can control the onset and further progression of the disease.

### *Polycystic Ovarian Syndrome*<sup>2</sup>

This is a heterogeneous disorder, clinically characterized by ovulatory failure, hirsutism, obesity, glucose intolerance, resistance to insulin, dyslipidemia and infertility.

The ovaries are enlarged, multicystic, and show hyperplastic theca cells around the cysts. Only very small amounts of estradiol are produced by the immature follicles.

Excessive amounts of androgens are produced by the hyperplastic theca cells and stromal cells.

The 3 key features of PCOS are

- Oligo or anovulation
- Hyper androgenesis
- Polycystic ovaries with the exclusion of related disorders.

### *Aetiology:*

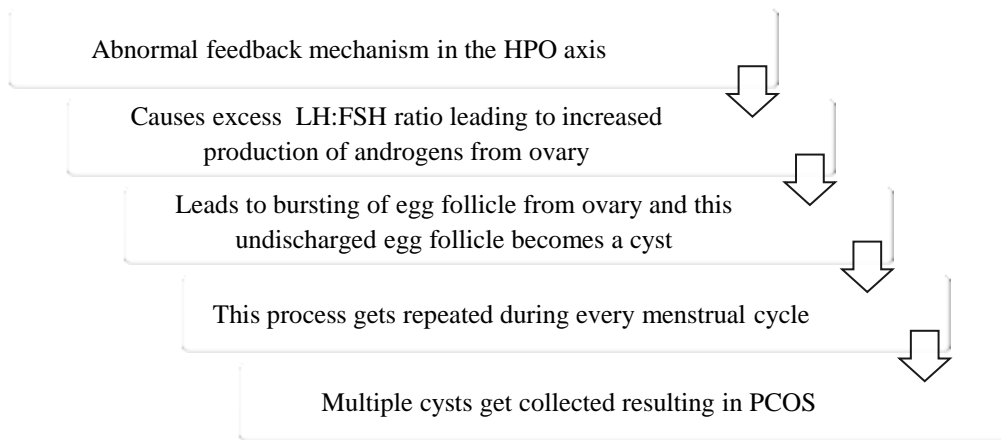
Exact cause is unknown and it can be due to

- Hormonal imbalance
- Genetic factors.
- Stress and psychological factors
- Sedentary lifestyle

The main biochemical abnormality in PCOS is hyperinsulinemia secondary to insulin resistance. This leads to ovarian overproduction of testosterone, and adrenal overproduction of DHEAS and androstenedione. Increased testosterone affects the

pituitary ovarian axis leading to decrease in production of estrogen, abnormal production of progesterone, and overproduction of testosterone, LH and FSH.

*Pathogenesis of PCOS*

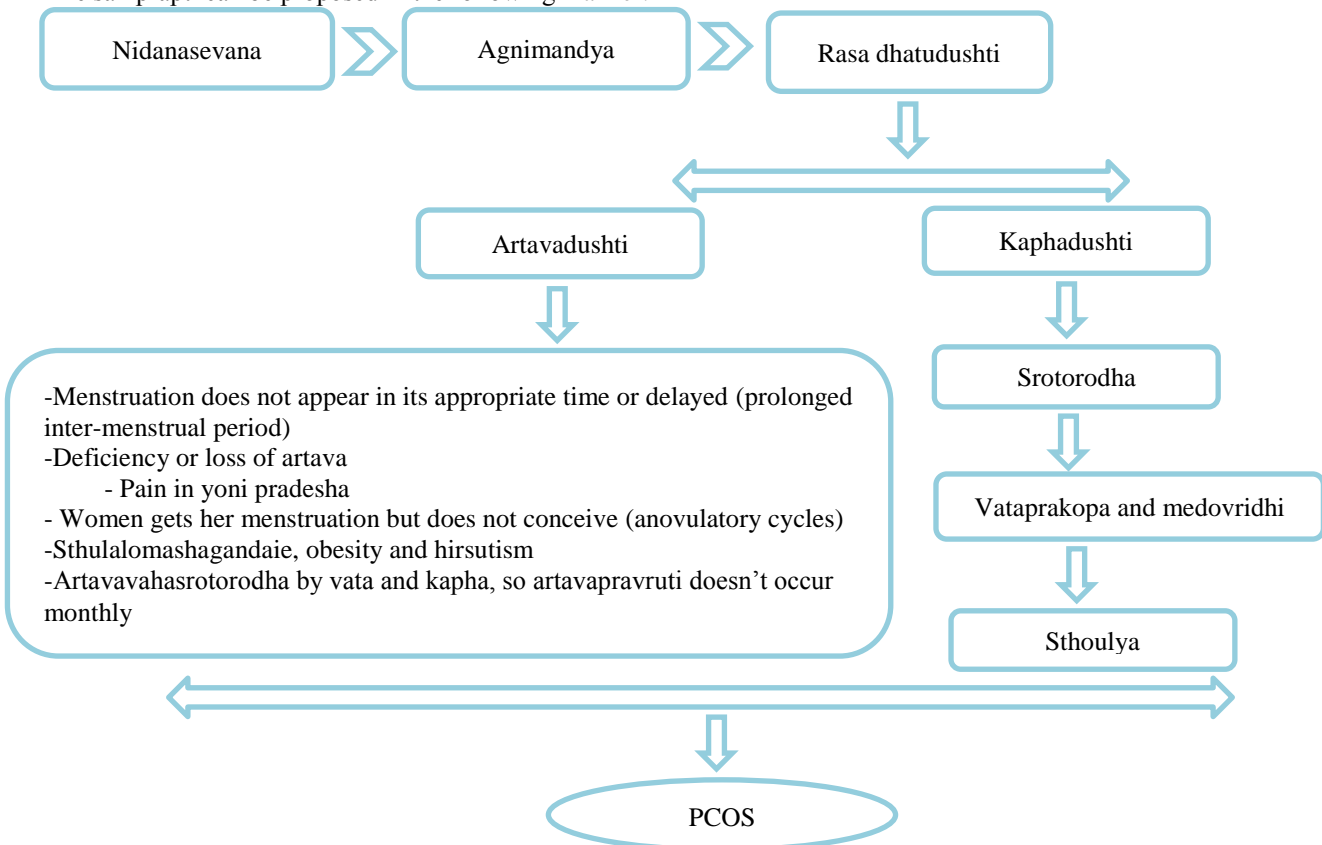


*How PCOS is Affecting Fertility?*

- Fertility problems may be related with elevated hormones, insulin or glucose levels
- All these can interfere with implantation as well as development of embryo
- Increased LH reduces the chances of conception and increase miscarriages
- Abnormal insulin levels may contribute to poor egg quality making conception more difficult.

*Ayurveda View on PCOS*

- This syndrome cannot be included under any particular condition in specific and can be correlated with Artavakshaya, Anartava, Pushpagnijataharini, based on its lakshanas, which are vatakaphapradhana rasa pradoshajavyadhis.
- Here, avaranasamprapti of rasa, meda, vata and artava with beejopaghata are the major causative factors involved.
- The samprapti can be proposed in the following manner.



*Pushpagni Jataharini*<sup>3</sup>

PushpaghniJataharini refers to the destruction of ovum. It presents with typical clinical features that includes:

- Vruthapushpam – destruction of pushpa
- Yathakalmprapashyati – menstruating regularly
- Sthoola – obesity and
- Lomashaganda – hairy chin and cheeks

Hence, PushpaghniJataharini can be defined as a condition where in even though the women menstruates regularly but that is associated with anovulation, along with other features of Obesity and Hirsutism.

*Artavakshaya*<sup>4</sup>

The lakshanas of artavakshaya are as follows:

- Yathochitakalamadarshanam - the menstruation does not appear in its appropriate time or is delayed or intermenstrual period is prolonged
- Alpata - the quantity of the menstrual flow is reduced or scanty
- Yoni vedana - it is associated with pain

*Anartava*<sup>5</sup>

Anartava is a condition characterized by the features which include:

- Vatakaphavruta - vata and kaphadoshas causing avarana
- Marganam – here refers to the Artavavaha Srotas
- Apravrutamanam – not being discharged

The aggravated vata and kaphadoshas obstruct the passage or orifices of channels carrying artava or Artavavahasrotas, and thus artava is not discharged.

*Shodhana Chikitsa*

The artavakshaya should be treated by the use of purifying measures and agneyadravyas. Dalhana says that for purification, only vamana should be used not the virechana, because virechana reduces pitta which in turn decreases artava while vamana removes saumyabhavas, resulting into relative increase in agneya constituents of the body, consequently artava also increases. Chakrapani says that by use of purifying measures srotases are cleared.<sup>6</sup>

Vamana and virechana clear urdwa and adhahsrotases respectively, thus both should be used, giving due consideration to the dosages of drugs used for purification and fitness of the woman. Basti also plays important role by providing beneficial effects.

|                          |   |
|--------------------------|---|
| Vamana                   | • In case of avarana samprapti and artava vyapat due to srotorodha and kapha dushti (menstrual irregularities, obesity, insulin resistance) |
| Virechana                | • In rasa, rakta, artava and pitta dushti lakshanas (hyper androgenism)   |
| Anuvasana & niruha basti | • In vata dushti, beejadosha sambandhi vandhyatwa (oligo ovulation, anovulation and inefficient ovulation)                                  |
| Uttara basti             | • Garbhasaya shodhana and tarpana   |
| Nasya                    | • To correct the HPO axis   |

*Rasayana Chikitsa*

- After shodhana, rasayanachikitsa should be adopted.
- Rasayanachikitsa aims at proper nourishment of saptadhatus.

- It is beneficial not only for enhancing longevity, intellect, physical and mental strength, and reproductive well being, but also for alleviation of disease.<sup>7</sup>
- Among the types of rasayana - Naimitikarasayana, Achararasayana and Ajasrikarasayana holds good for the management of female infertility.
- In the administration of rasayana, especially the ghrita shows miraculous result as it crosses the blood brain barrier.

*Benefits of Rasayana in PCOS*

- Rasayanas helps in normalisation of endocrine secretions and leads to hormonal balance, checks mood swings and psychological symptoms.
- Helps in folliculogenesis, hypoglycemia, hyperlipidemia.
- Removal of cysts and corrects ovulatory function
- Reduces androgens and an adjuvant therapy for hirsutism

RASAYANA YOGAS<sup>8-20</sup>

| RASAYANA   | MODE OF ACTION ON PCOS   |
|--|--|
| Medhyarasayana<br>Kalyanakagrita<br>Brahmigrita<br>Sukumaragrita | normalisation of endocrine secretions and leads to hormonal balance, checks mood swings and psychological symptoms                           |
| PhalaGrita   | Corrects hormonal imbalance  |
| BrihatShatavariGrita   | Regulates menstrual cycle, well known for its restorative properties of ovarian follicles.<br>Corrects hyperinsulinaemia.                    |
| ShatapushpaShatavariKalpa  | Enhance follicular maturity<br>Corrects menstrual irregularity   |
| Shitakalyanakagrita  | Useful in scanty menstruation, promotes garbhadharana.   |
| Nashatapushpantaka Rasa  | Helps to remove blockage in the channels and works on polycystic ovary due to kaphanashaka and granthihara property.                         |
| Chandraprabhavati  | Maintains improper and painful menstrual flow. Acts as kaphahara and helps in removal of cysts and corrects ovulatory function.              |
| TriphalaRasayana   | Increases the movement of apanavata, detoxify the doshas, helpful in weight management   |
| ShilajatuRasayana  | Regulates hormones, reduction of cystic follicles, maturation of ovarian follicles, and decreasing the increased ovarian and uterine weight. |
| Rasona<br>Shatavari<br>Shatapushpa                               | Correct hormonal influence and enhance follicular maturity   |
| Aswagandha   | Correct menstrual irregularities Controls mood swings, Natural energiser, helps body to adapt to internal and external stress.               |

II. DISCUSSION

- PCOS treatments mainly focussed on the different developmental conditions in ovary and to normalise its functions
- Shodhana followed by rasayana help in regulating the menstrual cycles, stimulate ovulation, insulin resistance, hyperandrogenism and obesity associated with PCOS
- The mentioned rasayanas have multipotential and beneficial effects in oligomenorrhea, amenorrhea, obesity etc.

III. CONCLUSION

- Rasayana plays a very important role in the preventive measures in the manifestation of symptoms of PCOS which is one of the important challenging aspect in the medical practice.
- In conditions of PCOS irrespective of the age groups Rasayana after Shodhana benefits in improving different elevated levels of hormone that are affected due to different conditions.
- Basic education followed by proper lifestyle benefitting in the due course of treatment in treating the symptoms of infertility is a major challenge.
- Rasayana with the combined effect of Shodhana helps in regulating menstrual irregularities followed by stimulating ovulation, insulin resistance, hyperandrogenism and obesity associated with PCOS.
- Hence Rasayana with Shodhana provides excellent results in providing long term solution to infertility patients.

REFERENCES

- [1] Dutta DC textbook of gynaecology edited by Hiralal Konar, Chapter 28. 6<sup>th</sup> edition. Calcutta: New Central Book Agency Ltd. 2013. p. 440.
- [2] Krishna Das KV, Textbook of Medicine. Chapter 102. 6<sup>th</sup> edition, Jaypee publishers. 2017. Vol- 1. p.709-710.
- [3] Tiwari PV, Kashyapa Samhita Kalpasthana, Chapter 6, verse 33.2-34.1. Reprint ed. Varanasi: Chowkhamba Visvabharati. 2013. p.357-358.

- [4] Murthy Srikantha KR. SusrutaSamhitha, Sutrasthana, Chapter 15, verse 12. Reprint ed. Varanasi: ChaukhambaOrientalia; 2010. Vol 1.p.101.
- [5] Murthy Srikantha KR. Ashtangasangraha, Sarirasthana, Chapter 1, verse 13, 3<sup>rd</sup> edition. Varanasi: Chowkhambaorientalia; 2001. Vol -2. p.6.
- [6] Dalhana, SushrutaSamhita, Nibandhasangraha andNyayaChandrika commentary, edited by VaidyaJadavjiTrikamjiAcharya.Sutrasthana, Chapter 15, Verse 12 Commentary.Reprint ed. Varanasi:ChaukhambaSanskrit Sansthan.2014.p.70.
- [7] BhavaPrakashaof Bhavamisra edited by SitaramBulusu. Uttarakhanda chapter 2, verse 1-2. Reprint ed. Varanasi:ChowkhambaOrientalia. 2014. Vol 2.p. 736.
- [8] Sharma Ram Karan, Dash Bhagwan. CharakaSamhitha, chikitsasthana, chapter1:2, verses 30-31. 4<sup>th</sup> edition. Varanasi: Chowkhamba Sanskrit Series Office; 2000. vol-3. p.46.
- [9] <https://www.ayurvitewellness.com/6731/why-grita-based-medhya-rasayana-for-pcos-pcod-polycystic-ovarian-disease/>(Cited 28<sup>th</sup> May 2019, 7.30pm)
- [10] BhavaPrakashaof Bhavamisra edited by SitaramBulusu. Madhyamakhand chapter 70, verses 54- 61. Reprint ed. Varanasi:ChowkhambaOrientalia. 2014. Vol 2.p. 696.
- [11] Sharma Ram Karan, Dash Bhagwan. CharakaSamhitha, chikitsasthana, chapter 30, verses 64-68. Reprint ed. Varanasi: Chowkhamba Sanskrit Series Office; 2004.Vol-5. p. 146.
- [12] Tiwari PV, KashyapaSamhitaKalpasthana, Chapter 5,verse 5-8, 10-11. Reprint ed. Varanasi: ChowkhambaVisvabharati. 2013. p.348-349.
- [13] Yoga Ratnakara edited by Dr.MadhamShetty Suresh Babu, Uttardaha, PradaraChikitsa, verses 46-51 1<sup>st</sup> edition. Varanasi: ChowkhambaSanskrit Series Office. 2008. Vol 2 .p.1146.
- [14] Bhaishajyaratnavali of ShriGovindaDasji edited by KonjivLochan. Chapter 67, verses 51-57. Reprint ed. Varanasi:Choukhamba Sanskrit Sansthan. 2009. Vol-3 .p.369.
- [15] BhaishajyaRatnavali of ShriGovindaDasji edited by KonjivLochan. Chapter 67, verses 58-60. reprint ed. Varanasi:Choukhamba Sanskrit Sansthan. 2009.vol 3 .p.369.
- [16] Sharma Ram Karan, Dash Bhagwan. CharakaSamhitha, chikitsasthana, chapter 1:2, verses 41-47. 4<sup>th</sup> edition. Varanasi: Chowkhamba Sanskrit Series Office; 2000. vol-3. p. 48-49.
- [17] Sharma Ram Karan, Dash Bhagwan. CharakaSamhitha, chikitsasthana, chapter 1:2, verses 51-54. 4<sup>th</sup> edition. Varanasi: Chowkhamba Sanskrit Series Office; 2000. vol-3. p. 50-51.
- [18] Kumari VH,Sarashetti RS, Hadimur KS, Patil KA. Effect of herbomineralformulation(ShilajatuRasayana) in letrozole-induced polycystic ovarian syndrome.BLDE Univ J Health Sci2016;1:108-12.
- [19] Tiwari PV, Kashyapasamhita,Kalpasthana, Chapter 2, verses 17-18. Reprint ed. Varanasi: ChowkhambaVisvabharati. 2013.p.327.
- [20] BhavaPrakashaof Bhavamisra edited by Prof. KR Srikantha Murthy. Purvakhanda chapter 6,Guduchyadivarga, verses 189-190. Reprint ed. Varanasi: ChowkhambaKrishnadas Academy. 2011. Vol 1.p. 258.