



Case Study

EFFICACY OF AYURVEDA POLYHERBAL MEDICINE IN POLYCYSTIC OVARIAN SYNDROME

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ABSTRACT

The most prevalent rising health risk for women of reproductive age is polycystic ovarian syndrome, a heterogeneous endocrine condition. The polycystic ovarian syndrome (PCOS) is a prevalent endocrinopathy that is multifactorial and polygenic and is characterized by several tiny ovarian cysts, oligo-ovulation or anovulation, and indicators of hyperandrogenism, differ from person to person throughout time. Here is a case report of a 15-year-old girl who presented with hirsutism, irregular menstruation and constipation, her USG report showed bilateral PCO pattern. Based on the clinical features, treatment principles adopted are *Aam paachana*, use of *Arthava janana Dravya, Vata anulomana* and *Granthi nashak chikitsa*. Initially, after 2 months of treatment menstruation became normal and marked reduction in the symptoms was found. Moreover, the hormonal level became normal after 6 months of treatment. This case study is an example that PCOS can be effectively managed by adhering to Ayurvedic principles.

INTRODUCTION

Stein and Leventhal in 1935 first identified PCOS as a medical condition and is frequently linked to insulin resistance and obesity. It is the most prevalent endocrine disorder affecting women of reproductive age. About 20–30% of young adults of reproductive age frequently suffer from this condition and 20% of healthy women have the polycystic illness.^[1] Ovarian cysts that inhibit normal ovarian function are a symptom of the illness known as polycystic ovarian syndrome. According to the Rotterdam criteria, polycystic ovarian syndrome is characterized by clinical and/or biochemical hyperandrogenism, oligo or anovulation, and polycystic ovary. A patient is diagnosed with PCOS if they meet two out of the three requirements.^[2] There is limited data availability of PCOS prevalence in India, though some studies suggest the range of prevalence lies between 3.7% to 22.5% in India.^[3] PCOS is regarded as a complicated condition with a range of symptoms that affects not just women of reproductive age but also adolescents and postmenopausal women.^[4] Diabetes, pre-diabetes,

endometrial cancer, heart attacks, hypertension, high levels of low-density lipoprotein, and low levels of high-density lipoprotein are all associated with an elevated risk of cardiovascular disease in people with PCOS.^[5] The gynecological illnesses have been classified as *Yonivyapada* in Ayurveda. Ayurveda emphasizes on preservation of *Shudha Artava* (a healthy ovum) during the fertile phase. To develop and sustain a healthy life, *Ritumaticharya, Dinacharya,* and *Rajswalacharya* provide assistance.^[6] There is no specific term for PCOS in Ayurveda, it is clinically similar to the symptoms of multiple conditions like *Aartavavaha strotas dushti, Vishamaartava, Granthi, Santarponth vyadhi,* and *Bandhya Yonivyapad*. Thus, PCOS can have an impact on weight, acne, facial hair development, and baldness, as well as the menstrual cycle, fertility and hormone levels.

A 15 years old female patient came to Kaumarabhritya OPD with the chief complaint of hair growth around the upper lip (hirsutism) since one and a half year, irregular menstrual cycle with scanty bleeding with associated complaints of regular constipation and decreased appetite from last 5-6 months. Patient did neither have any significant medical, surgical, or psychiatric history nor history of prolonged illness.

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General examination

Patients general condition was good at the time of OPD visit, Height-165cms, Weight-50kg, Pulse rate-90/min, Respiration rate -36/min., PA-Soft, Temperature- Afebrile also, there was no pallor, no icterus, no lymphadenopathy and no organomegaly.

Systemic Examination revealed no abnormality in cardiovascular, respiratory system, nervous system and gastro-intestinal system examination. The detailed menstrual and personal history of the patient is discussed in the Table no. 1& 2 respectively.

Table 1: Menstrual History

Menstrual history	BT	AT
Age of Menarche	13 years	
Interval	Every 45 days	Interval - Every 30 days
No. of days of bleeding	3 days	No. of Days of Bleeding - 3 Days
No. of pads/day	2	No. of Pads per Day - 2-3
Pain	++	Pain = +
Clots	++	Clots = -
Discharge	+ (Whitish)	Discharge = -

Table 2: Personal History

Diet	Veg
Appetite	Reduced
Bowel Habit	Constipated
Bladder	Normal Micturition
Sleep	Excessive/reduced
Allergy	None

DIAGNOSTIC ASSESSMENT

- This case was diagnosed as PCOS with the help of patients sign, symptoms, menstrual history and relevant laboratory investigations i.e., USG findings and LH, FSH ratio as shown in (Table.3). The presence of at least 3 of the following confirm diagnosis of PCOS^[7]: Polycystic Ovaries on USG
- Oligomenorrhea or anovulation
- Clinical or bio-chemical evidence of Hyperandrogenism /Hirsutism
- LH: FSH ratio > 3

Table 3: Investigations

Investigations	Before Treatment	After Treatment
Hemoglobin	11.2gm%	12gm%
WBC	6300/cu.mm	5000/cu.mm
Luteinizing Hormone	11.52mIU/mL	5.98mIU/mL
Follicle Stimulating Hormone	3.22mIU/mL	4.15mIU/mL
Testosterone-Total	53ng/dL	14.65ng/dL
USG (Right and Left ovary measurements)	R-4.0×4.0×2.4cm. vol. 19.5cc L-3.7×3.6×2.2cm. vol.14.8cc	R-3.3×3.1×2.2cm. vol.11.9cc L-3.2×3.1×2.0cm. vol.10.1cc

As per the Ayurvedic aspect of disease the symptomatic pattern of patient suggests formation of *Ama*, *Granthi*, and *Kshaya* (Malformation and malfunctioning) of *Ras* and *Rakta Dhatu*. For better understanding Ayurveda aspects of the disease diagnostic parameters can be explained as-

Nadi (pulse)- *VK*, *Mutra* (urine) - *Samyak mutra pravriti*, *Mala* (stool)- *Malbaddhata*, *Jihwa* (tongue)- *Sama*, *Shabda*- *Samyak*, *Sparsha* (touch)- *Ushna*, *Drika* (eye)- *Samanya*, *Aakriti* (physical appearance)- *Samanya*.

Prakriti (nature)- *Vatakaphaja*, *Sara* (purest body tissue) – *Madhyama* (medium), *Samhanana* (Body compact) – *Madhyam* (medium), *Pramana* (Body proportion)- *Madhyam* (medium), *Satmya* (homologation) –*Madhyam* (medium), *Satva* (mental strength) – *Madhyam* (medium), *Vaya* (age)-15years.

Therapeutic Intervention

The treatment was given for total duration of 7 months which was divided into 2 steps - in step 1 major focus was to relieve patient from Amenorrhea,

constipation and to start *Ama-pachana* from day 1 to day 30 with 15 days follow up. In step 2 the major focus was to normalize vitiated *Pitta dosha* (correct the hormonal imbalances) and *Granthi nashaka Chikitsa* (reduce the size of cyst) from 2nd to 7th month with 3 month follow up in between. The detailed timeline with therapeutic intervention duration and doses is given in Table No. 4 below. This patient is still under follow-ups with the same treatment.

Table 4: Treatment timeline

S.N.	Timeline	Treatment advised, doses and frequency of intake	Route
1.	02-07-2022 to 17-07-2022	1. <i>Rajahpravartini vati</i> - 250mg twice a day after meal 2. <i>Abhayarishta</i> - 15ml with equal amount of lukewarm water after meal at bed time 3. <i>Lashunadi vati</i> - 250mg twice a day after meal	Oral
2.	17-07-2022 to 02-08-2022	First follow-up findings- ➤ Mild relief in the constipation. ➤ Premenstrual symptoms present so <i>Rajahpravartini vati</i> was stopped. 1. <i>Abhayarishta</i> - 15 ml with equal amount of lukewarm water after meal at bed time 2. <i>Lashunadi vati</i> - 250mg twice a day after meal	--
3.	02-08-2022	Second follow-up findings- ➤ Constipation relieved. ➤ Appetite normalized. ➤ Normal menstrual bleeding for 4 days from 19-07-2022 to 22-07-2022. Advised investigations - Intervention changed from 03-08-2022.	
4.	03-08-2022 to 02-11-2022	1. Powder mix of following drugs with honey twice daily empty stomach a) <i>Ashoka Churna</i> - 1gm b) <i>Lodhra Churna</i> - 1gm c) <i>Shatavari Churna</i> - 1gm d) <i>Shatpushpa Churna</i> - 500mg e) <i>Methika Churna</i> - 500mg 2. <i>Kanchanar guggul</i> (250mg) - 1 tab twice daily after meal with <i>Anupana</i> of <i>Varun Shigru Kashaya</i> (10ml) 3. <i>Kumaryasava</i> - 10ml twice daily after meal	Oral
5.	02 -11-2022	Third follow-up findings ➤ Normalization of menstrual cycle from 45 days to 30 days during last 3 cycles. ➤ Mild visible relief in hirsutism. Continued same treatment.	
6.	03-11-2022 to 02-02-2023	1. Powder mix of following drugs with honey twice daily empty stomach - a) <i>Ashoka Churna</i> - 1gm b) <i>Lodhra Churna</i> - 2gm c) <i>Shatavari Churna</i> - 1gm d) <i>Shatpushpa Churna</i> - 500mg e) <i>Methika Churna</i> - 500mg 2. <i>Kanchanar guggul</i> (250mg) - 1 tab twice daily after meal with <i>Anupana</i> of <i>Varun Shigru Kashaya</i> (10ml) 3. <i>Kumaryasava</i> - 10ml twice daily after meal	Oral

7.	02-02-2023	<p>During fourth follow-up patient advised to repeated investigations and visit next day. Reports revealed (Table No.3)</p> <ul style="list-style-type: none"> ➤ Reduction in cyst size ➤ Normalization of LH:FSH ratio ➤ Marked reduction in testosterone levels. <p>Continued same treatment with every 3 months follow ups.</p>	
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RESULT AND DISCUSSION

In this case reduction in cyst size, normalization of LH:FSH ratio and marked reduction in testosterone levels were achieved by above mentioned treatment. The *Rajahpravartini vati* composition makes it *Katu rasa*, *Ushna virya*, *Sara*, *Teekshna guna* and *Pitta vardhak* properties due to these it shows *Srotoshodhana* (cleansing the channel) effect.^[7] *Kanchanara guggulu* contains *Guggulu* and *Kanchanara* as ingredients, the bitter, astringent, and pungent flavour of *Guggulu* aids in fat burning and improves digestion, and it has been reported to be useful in regulating *Kapha* by correcting metabolism. *Kanchanara* (*Bauhinia variegata*), which has anti-inflammatory and anti-diabetic characteristics, reduces insulin resistance, which is frequently linked to PCOS. *Kanchanara guggulu* also contains *Vata-Kapha samana*, *Lekhana* (scraping), and *Shodhohara* (anti-inflammatory) qualities.^[8] *Varunashigru Kwatha* mitigates *Kapha* and *Medas*, showing effect in this case as the Ovarian cyst development is mostly caused by the *Kapha-Vata-Meda dosha*. *Abhayarishta* has property of *Sarak*, *Malamutra vibandhahar*, *Pachakagni-pradipan*. It relieves *Malabaddhata* by increasing *Snigdhatva* in *Antra* thus and makes defecation easy. *Abhayarishta* contains *Haritaki* as one of its main contents have complex antibiotic and anti-fungal compounds to cure various diseases.^[9] *Lasunadi Vati* has *Vatanulomana*, *Shoolahara*, *Deepana*, and *Paachana* effects it enhances the *Pitta dosha* while reducing the *Vata* and *Kapha doshas*.^[10] *Kumaryasavam* have *Vata Kapha Samanam*, *Deepana Pachanam*, and *Arthava Pravartakam* (ovulation-inducing characteristics) which is required in cases of PCOS. It contains *Kumari* (*Aloe vera*) which on oral administration in experimental studies restored normal blood glucose levels, markedly decreased plasma insulin, and decreased triglyceride levels in the liver and plasma.^[11] *Ashoka* is used to treat menstruation irregularities, hormone imbalance, and skin conditions including acne and hirsutism. *Shatavari* has the property of regulating menstrual blood flow and regulating normalcy of the menstrual cycle.^[12] *Lodhra* has *Shothahar*, *Trushnahar*, *Atisarhar*, *Asrajit*, *yonigata shwetastravahar* properties, it has *Kashaya*, *Katu rasa* due to which it is *Kapha-pittahar* in nature thus helpful in curing PCOS.^[13] *Shatpushpa* improves the development of the follicles, which regulates periods and raises the likelihood of ovulation.^[14]

Studies on seed extract of *Methika* shown significant reduction in ovarian volume and size of cyst. It also showed increase in LH and FSH level.^[15]

CONCLUSION

PCOS is a complicated disorder that affects women and has characteristics related to metabolism, reproduction, and psychology. Hyperandrogenism and insulin resistance each play a part in pathophysiology of PCOS. The direct connection between Ayurvedic writings and PCOS is difficult to establish. But both can be understood at the level of involvement of *Doshadushya* participation and effect of Ayurveda treatment can accessed.

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