

Management of Polycystic Ovarian Syndrome by Ayurvedic Formulations and Yogic Intervention – A Case Report

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ABSTRACT:

PCOS is characterized by biochemical hyperandrogenism, often associated with ovulatory disorders but the exact pathophysiology remains unclear. As PCOS is a metabolic disorder, *Vishama Ahara* and *Vihara* cause impairment of the function of *Agni* (digestive fire) at various levels is a major etiological factor of PCOS as per Ayurveda. In the present study 19 years old, an unmarried female was diagnosed with polycystic ovarian syndrome based on clinical parameters, laboratory investigation and ultrasonographic findings. She has been treated with Ayurvedic formulations i.e. *Chitrakadi Vati* (250 mg) *Triphala kwath* (40 ml), *Rajpravartani Vati* (250 mg), *Triphala Guggulu* (250 mg), *Syp Fetone* (2 tsp), *Hingvastak Churna* (5 mg) twice a day and *Mridu Virechan* with *Erand tail* starting with 10ml and end with 30ml. Along with medicines a regular Yoga protocol including *Asana* (Joint movements, Strengthening and Digestive & abdominal group series), *Kriya* (*Kapalbhati*), *Pranayama*, meditation, and relaxation for a minimum of 6 hours a week with diet modifications. After the treatment patient showed significant symptomatic improvement and had regular menstruation, normal BMI along with improved sleep pattern.

KEYWORDS: *Ayurveda*, Diet modifications, Menstrual Irregularity, PCOS, *Yoga*.

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INTRODUCTION:

Polycystic ovary syndrome (PCOS) is a common and complex disease in women, but its definition remains unclear and controversial. PCOS is characterized by biochemical hyperandrogenism, often associated with ovulatory disorders and polycystic ovaries. [1] Polycystic ovary

syndrome (PCOS) is a most common endocrine disorder in women of childbearing age. Globally, 4-20% of women are affected during the reproductive period.[2] PCOS is a complex polygenic disease with strong epigenetic and environmental influences, including dietary and lifestyle factors.[3] Obesity and overweight are the main chronic

manifestations of the disease, causing other hormonal imbalance that affects follicular growth during the ovarian cycle, leaving the affected follicles in an immature form.^[4] It causes multiple ovarian cysts associated with androgens, hirsutism, oligomenorrhea, infertility, and pregnancy complications.^[5] Recently, it has become evident that polycystic ovarian syndrome is not only the most common cause of anovulation and hirsutism, but is also associated with a characteristic metabolic disorder like insulin resistance, obesity, and metabolic syndrome that is important for long-term health.^[6] So now it is crucial to provide an effective cure for all etiological factors associated with the syndrome.

Ayurveda has its own concepts and logic that are different from modern. *Ayurveda* describes PCOS as an alteration involving *Doshas*, *Dhatu*, and *Updhatu* equally. ^[7] Although PCOS is not discussed in the *Samhitas* many references are near to signs and symptoms described under the term *Aartav Dusti* and *Artava Kshaya*. The *Dosha* and *Dushya* of an unnamed disease should be considered for the cure and the treatment will be planned accordingly. *Vishama Ahara* and *Vihara* cause digestive and metabolic slowdowns, resulting in immature digestive extracts and immature *Rasa* formation, affecting menstrual blood, increasing *Medha Dhatu* and *Kapha*, and causing congestion in body tubes which lead to obesity, oligomenorrhea, and amenorrhea. If *Aartava* is considered an ovarian hormone, the pathophysiology of PCOS in the context of *Avarana* by *Dosha* can be understood. This *Aavarna* disrupts the HPO axis's homeostasis, resulting in hormonal imbalance and PCOS. Different pharmaceutical treatments have been proposed for PCOS. ^[8,9] However, the side effects of long-term treatments and their

probable low efficacy have made *Yoga* and *Ayurveda* valuable options for the treatment of the disease. The increasing burden of disease warrants a need to find an effective and appropriate cure for the disease by modalities discussed in *Yoga* and *Ayurveda* scriptures along with diet modification and lifestyle management.

PATIENT INFORMATION:

A 19 years old female patient, a student in post-graduation visited *Ayurveda* OPD with a complaint of irregular menstruation, pain in the lower abdomen, increase in weight for the past three years. There was a history of indigestion for 2 years. She was diagnosed with PCOS in 2019 and was on allopathic medication (Ethinyl Estradiol (0.03mg) + Drospirenone 3mg) for the past two years. However, there was no significant improvement in her associated symptoms then she consulted for *Ayurveda* treatment. The patient has a history of disturbed sleep and erratic eating habits.

There was no history of cardiovascular disease, hypo or hyperthyroidism, tuberculosis, autoimmune disease, sexually transmitted diseases, HIV, hepatitis B, Bronchial asthma, anemia, or any major psychiatric diseases.

Routine blood investigations were within normal range. There was a strong history of D.M. in her family members. She was under stress because of her menstrual irregularities and family pressure for her studies. She had a weight of 62 kgs, and a BMI of 25. 47 so categorized as overweight.

Her USG showed multiple small follicles of 5-10 mm in diameter in 10-12 numbers arranged in a peripheral manner in both ovaries.

Her Hormone assay had –

Estradiol E₂ = 614.59 pg/ml

Progesterone = 1.11 ng/ml

TSH = 1.98 μ IU/ml

Random Blood Sugar = 86.5 mg/dl

Based on clinical hormonal biochemical findings, this condition was considered as *Santarpanajanya*, *Artava Kshaya* where *Avaran* (enclosure) of *Artavavahasrotas* (channel transporting *Artava*) , *Kapha Medo Dusti* and *Srotorodha* became the causative factors. Detailed analysis of her signs and symptoms showed an increase in *Vata- Kapha Dosha* and a reduction in *Pitta*. Hence *kapha-medohara* and *Vata-Anulomana* treatment was planned.

TIMELINES:

This set of medicine was continued from 06-10-21 to 17-12-2021 along with specific diet advice and a *Yoga* program.

Lifestyle modification was advised to include modifications in daily routine, diet and sleep patterns their compliance was asked in subsequent visits. Light, hot, easily digestible food and roti of mixed grains flour were advised and dairy products, sweet items, fast

food and processed food, and non-vegetarian items were restricted. (Table 2)

The patient was advised to do 1 hour of *Yoga* including Joint movements, *Tadasana*, *Trikonasana*, *Padahasthasana*, *Vajrasana*, *Shashankasana*, *Pawanmuktasana*, *Naukasana*, *Shalabhasana*, *Bhujangasana*, (each 3 sets), *Savasana*, *Anulom-Vilom Pranayama*, *Kapalbhati kriya*, and *Om meditation* for minimum 6 hours in a week.

Once the functioning of *Agni* was maintained and she had her menses. *Mridu Virechan* was planned as part of small shodhana therapy.

The patient was advised to follow dietary modifications and yoga protocol.

After the diet, *Yoga*, and lifestyle modification along with an *Ayurvedic* prescription marked improvement was noted in menstrual irregularities. (Table 3)

The BMI of the patient was reduced from 25.47 to 23.8.

She also has marked improvement in her sleep pattern, general well-being and stress levels but we had not used any instrument to assess these symptoms.

Table 1- Details of therapeutic intervention

Duration/ Date	Médecins
06-10-21 to 05-11-21	<ul style="list-style-type: none"> <i>Chitrakadi Vati</i> 250 mg twice a day <i>Triphala kwath</i> 40 ml twice a day <i>Triphala Guggulu</i> 250 mg twice a day
06/11/21 to 11/02/22	<ul style="list-style-type: none"> <i>Hingvastak Churna</i> 5 gm with 1 tsp ghee before food in lunch and dinner <i>Triphala Guggulu</i> 250 mg twice a day <i>Syp Fetone</i> 2 tsp twice a day <i>Rajapravartni Vati</i> 250 mg twice a day
12/02/22	<ul style="list-style-type: none"> <i>Mridu Virechan</i> with <i>Eranda tail</i> starting with 10ml, 15ml, 20ml, 30ml
20/02/22 to 20/08/22	<ul style="list-style-type: none"> <i>Chitrakadi Vati</i> 1 tab BD <i>Kanchnar guggul</i> 250mg twice a day <i>Hingvastak Churna</i> 5 gm with 1 tsp ghee before food in lunch <i>Syp Fetone</i> 2 tsp twice a day

Table 2 - Diet Modification Advice

Recommended Diet	Restricted diet
<i>Laghu Ahara</i> (light diet)	• Non-vegetarian diet (egg, meat)
<i>Ushna Ahara</i> (warm diet)	• Cold water/ carbonated drinks
<i>Pathya Ahara</i> (wholesome diet)	• Use of refrigerated items bakery items (cakes, biscuits, chocolate)
<i>Dal- Moong dal/ Arhar dal/ kulatha dal</i>	• Fast food items (Pizza, Burger, pasta, Chowmin, Maggie)
Veggies - <i>Lauki/ Tauri/ Palak /Chaulai/ karela/</i>	• Use of sweets, chips, <i>Aloo Bhujia, Samosa</i> , curd, paneer, cheese, butter, white flour items, and Banana
Fruits - Apples/ pomegranate/ papaya/ <i>Amla</i>	Others
Chapati of wheat + <i>Yava+ Chana + Moong Daal</i>	Late-night use of phone
Have soups of vegetable/ <i>Daal</i>	Use of AC, cooler
Soaked <i>Munakka</i> and take in the morning	Day time sleeping
250 ml buttermilk	
Cow ghee 2 tsf daily in the diet	

Table 3 - Follow-Ups & Outcome

Menstruation	1 st follow-up	2 nd follow-up	3 rd follow-up	4 th follow-up	5 th follow-up
LMP	2-10-2021	17-12-2021	19-01-2022	26-03-2022	09-05-2022
Regular/irregular	Irregular	Irregular	Regular	Regular	Irregular
Duration	2 days	3 days	3 days	4 days	3 days
Flow	Light	Light	Light	Light	Light
Clots	Present	Present	Present	Present	Present
Pain	Severe	Severe e	Severe	Moderate	Moderate
Cycle length	90 days	75 days	32 days	67 days	43 days

Menstruation	6 th follow-up	7 th follow-up	8 st follow-up	9 nd follow-up
LMP	09-07-2022	24-08-2022	28-09-2022	03-11-2022
Regular/irregular	Regular	Regular	Regular	Regular
Duration	3 days	4 days	5 days	8 days
Flow	Light	Normal	Normal	Normal
Clots	Present	Present	Present	Present
Pain	Moderate	Moderate	Moderate	Moderate
Cycle length	60 days	45 days	34 days	35 days

DISCUSSION:

The case presented here is a case of polycystic ovarian syndrome. From an *Ayurvedic* perspective, the present manifestation in form of *Nidana* and *Lakshana* the *Samprapti* can be postulated and its *Vighatana* was planned by *Ayurvedic* norms. In the present case, PCOS resulted from the patient's poor lifestyle and dietary habits with a strong hereditary predisposition for metabolic syndrome. The *Nidanas* for this case *Abhishyandi Ahara*, *Divaswapna*, and *Avyayama* (sedentary habits) lead to *Kapha Medo Dusti* and *Srotorodha*. The movement of *Apana Vata* is obstructed by increased *Kapha* and *Medas*. The excess weight gain of patient incomplete bowel evacuations correlated with *Samavasta* (metabolic toxins) in *Ayurveda*. *Apathya Ahara* and *Vichara* caused the formation of *Aama* in *Rasa Dhatu*, resulting in *Dusti* of *Upadhatu* of *Rasa* i.e., *Artava*.

Hence, the treatment was planned to use the drugs with *Agni Amapachana*, *Deepana*, *Vatanulomana*, *Lekhana*, and *Artavapravastak* properties.

In this case, we consider *Kapha & Vata* as *Dosha*, *Rasa*, *Rakta*, *Mamsa*, and *Meda* as *Dooshya*. *Rasavaha*, *Raktavaha*, *Mamsavaha*, *Medovaha*, *Arthavavaha*, and *srotas* are involved in etio-patho-genesis.

Chitrakadi Vati contains drugs with hot properties to balance *Kapha* and *Vata*, hence it is useful to improve *Agni* (digestive fire). This relieves indigestion and *Ama* conditions in the body. [10]

Triphala Guggul is the composition of *Triphala*, *Pippa* and *guggul*. This drug helps reduce weight, stimulates the liver, is anti-inflammatory, treats the *Ama* condition in the body, and has a mild laxative effect. [11]

Triphala Kashaya treats inflammation arising due to *Vata- Kapha* imbalance, it influences obesity and enhances liver functions. [12]

Hingvastak Churna with *Trikatu Ajmeda*, *Saindhava*, *Jirak*, *Hingu*, and *ghee* balance *Vata & Kapha* helps in digestion and *Vata-Anulomana*. It balances *Vata* as it has carminative property. [13]

Fetone syrup is a restorative tonic for females useful in the treatment of regulating the menstrual cycle. It is very useful in irregular menstrual cycles, dysfunctional uterine bleeding, and menopausal syndrome. It relieves general weakness, backache, stress, and anxiety. [14]

Rajapravartni Vati is primarily used for inducing menstruation, and regularizing periods. It is used in the *Ayurvedic* treatment of scanty bleeding and amenorrhea. [15]

Kanchnar guggul has anti-obesity, balanced *Kapha & Medha Dhatu*. It helps in reducing insulin resistance associated with PCOS. [16]

Regular *Yoga* helps to lose weight and enhances *Agni* and improved bowel clearance and stress levels.

Diet Modification has helped the patient control the excess weight gain and improve the *Agni* by *Laghu* and *Pathya Ahara*. High intake of low GI carbohydrates contributes to dyslipidemia and weight gain and stimulates hunger and carbohydrate craving.

This case study showed that *Yoga* interventions can be helpful to manage the symptoms associated with PCOS. *Yoga* therapy works with symptomatic treatment, lifestyle modification for weight reduction in PCOS. [17] After the intervention, a normalized menstrual cycle reduced weight, and pain reduction has been reported. Research shows that a 5% body weight reduction can restore ovulation and normalize menstrual irregularities. [18] Studies have explored crucial improvement in women with PCOS

due to *Yoga* therapy. ^[19] Dysfunction of the hypothalamic-pituitary-adrenal (HPA) axis is a common cause of PCOS which cause hormonal imbalance and androgen excess that further shows anovulation, menstrual irregularity, and other associated symptoms. *Yoga* can shift the hypothalamic pituitary adrenal (HPA) axis and reduce toxic stress by decreasing the activity of the sympathetic nervous system which may be the main improvement of PCOS. ^[20] Also, *Yoga* improves reproductive functions and the menstrual cycle by enhancing the blood circulation of the pelvic region. ^[21]

The herbal medicine needed in this case helped to normalize *Agni* (digestive fire) reduce *Kapha* (obesity) and induce mensuration. Hence treatment of *Yoga* and *Ayurveda* and dietary modification helped the patient to have a normal menstrual cycle. This case was successfully treated with *Yoga* and *Ayurveda*.

CONCLUSION:

On the basis of this single study, it can be concluded that individualized *Ayurvedic* treatment can significantly manage PCOS cases, which can produce changes at functional and pathological levels. *Ayurvedic* medicines along with *Yoga* exercises, lifestyle, and diet modifications will be more beneficial in the treatment of these cases. Further large sample studies should be done to re-evaluate the effectiveness.

INFORMED CONSENT:

The patient's consent was duly taken for registration as ethics for treatment and publication without disclosing the patient's identity.

LIMITATION OF THE STUDY:

The same intervention may be tried in more cases for its scientific outcome.

REFERENCES:

1. Azziz, R., Carmina, E., Dewailly, D., Diamanti-Kandarakis, E., Escobar-Morreale, H. F., Futterweit, W., Janssen, O. E., Legro, R. S., Norman, R. J., Taylor, A. E., Witchel, S. F., & Androgen Excess Society. Positions statement: criteria for defining polycystic ovary syndrome as a predominantly hyperandrogenic syndrome: an Androgen Excess Society guideline. *The Journal of clinical endocrinology and metabolism*. 2006; 91(11): 4237–4245.
2. Deswal R, Narwal V, Dang A, Pundir CS. The Prevalence of Polycystic Ovary Syndrome," A Brief Systematic Review. *Journal of human reproductive sciences*. 2020; 13(4): 261–271.
3. Escobar-Morreale H. F. Polycystic ovary syndrome: definition, aetiology, diagnosis, and treatment. *Nature reviews. Endocrinology*. 2018; 14(5): 270–28.
4. Dağ, Z Ö, & Dilbaz, B. Impact of obesity on infertility in women. *Journal of the Turkish German Gynecological Association*. 2015; 16(2): 111–117.
5. Kshetrimayum C, Sharma A, Mishra V V & Kumar S. Polycystic ovarian syndrome: Environmental/occupational, lifestyle factors; an overview. *Journal of the Turkish German Gynecological Association*. 2019; 20(4), 255–263.
6. S Franks. Polycystic ovary syndrome. *New England Journal of Medicine*. 1995; 333(13), 853–861.
7. Sharma P, Sharma U, & S. Sharma. An effort to understand PCOS in the ayurveda context," *Ayushdharma*. 2016; 1(2).

8. Andrade RJ, Lucena MI, Fernandez MC, et al. Fulminant liver failure associated with flutamide therapy for hirsutism. *Lancet*. 1999; 353: 983.
9. Lindh I, Ellström AA, Milsom I. The long-term influence of combined oral contraceptives on body weight. *Hum Reprod*. 2011; 26: 1917-1924.
10. Shri Govinddas, Bhaishajyaratnavali, 18th edition, Chapter 8 Grahanirogchikitsa prakaran, Chaukhambha Prakashan Varanasi, 2016-17, p- 239.
11. Shailaja Srivastava, Sharangdhar Samhita, 4th edition, Madhyam khand, Vatak Kalpana, Chaukhambha oriyantaliya, Varanasi, 2005, p-205.
12. Shri Govinddas, bhaishajyaratnavali, 18th edition, chapter 42 shothrog chikitsaprakaranam, chaukhambha prakashan, Varanasi, 2016-17, p- 793
13. Gupta AD., Astanghridayam, 1st edition, chapter 14 gulmchikitsa, chaukhambha prakashan, Varanasi, 2007, p-380
14. Shri Govinddas, bhaishajyaratnavali, 18th edition, chapter 67 yonivyapachchikitsa prakaranm, chaukhambha prakashan, Varanasi, 2016-17, p-1045
15. Shri Govinddas, bhaishajyaratnavali, 18th edition, chapter 44 galgandadirogchikitsa, chaukhambha prakashan, Varanasi, 2016- p-824
16. Shrivastava, R., Mishra, S., Singh, R., & Shrivastava, P. Effect of integrated approach of yoga and naturopathy on polycystic ovarian syndrome," A case study. *Journal of family medicine and primary care*. 2022; 11(4): 1525-1527.
17. Goodman, N. F., Cobin, R. H., Futterweit, W., Glueck, J. S., Legro, R. S., & Carmina, E. American Association of Clinical Endocrinologists, American College of Endocrinology, and Androgen Excess and PCOS Society disease state clinical review. guide to the best practices in the evaluation and treatment of polycystic ovary syndrome-part 2. *Endocrine Practice*. 2015; 21(12): 1415-1426.
18. Thakur, D., Singh, S. S., & Tripathi, M. Effect of yoga on polycystic ovarian syndrome," A systematic review. *Journal of Bodywork and Movement Therapies*. 2021; 27: 281-286.
19. Milutinović, D. V., Macut, D., Božić, I., Nestorov, J., Damjanović, S., & Matić, G. Hypothalamic-pituitary-adrenocortical axis hypersensitivity and glucocorticoid receptor expression and function in women with polycystic ovary syndrome. *Experimental and clinical endocrinology & diabetes official journal. German Society of Endocrinology and German Diabetes Association*. 2011; 119(10): 636-643.
20. Mohseni, M., Eghbali, M., Bahrami, H., Dastaran, F., Amini, L. Yoga Effects on Anthropometric Indices and Polycystic Ovary Syndrome Symptoms in Women Undergoing Infertility Treatment," A Randomized Controlled Clinical Trial. *Evidence-based complementary and alternative medicine*. 2021; 5564824.

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