

Case Report



Ayurvedic management of coexisting hypothyroidism and PCOS: A case report

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ABSTRACT :

Background: Hypothyroidism and Polycystic Ovarian Syndrome (PCOS) are common endocrine disorders that frequently coexist, impacting metabolic, hormonal, and reproductive health. This case report explores the potential of Ayurvedic management in addressing these complex conditions. **Clinical Presentation:** A 17-year-old female presented with symptoms of hypothyroidism, including fatigue, weight gain, hair fall, and irregular menstrual cycles. Diagnostic findings revealed elevated thyroid-stimulating hormone (TSH) levels (39.4 μ IU/mL) and features consistent with PCOS. **Outcome:** The patient received Ayurvedic treatment such as *Agnitundi Vati*, *Kanchanara Guggulu*, and *Kumaryasava*, along with dietary modifications. After six months of treatment, the patient showed marked clinical improvement, including regularization of menstrual cycles, significant weight reduction, and normalization of TSH levels (6.46 μ IU/mL after three months, sustained at 5.86 μ IU/mL after two years). Ultrasonography confirmed the resolution of PCOS features. No adverse reactions were reported. Patient tolerated the treatment well. **Conclusion:** The treatment for a period of 6 months has given a good outcome with no adverse events highlighting the potential of Ayurvedic interventions in the holistic management of complex endocrine disorders like hypothyroidism and PCOS. However, further research in this area is necessary to validate the results.

KEYWORDS: *Ayurveda*, Hypothyroidism, Polycystic Ovarian Syndrome (PCOS), Case Report

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1. INTRODUCTION

Hypothyroidism, a prevalent endocrine disorder characterised by reduced thyroid hormone production, results in lowered basal metabolic rate (BMR) and manifests as weight gain, fatigue, hormonal imbalance, and infertility. [1] In India, thyroid dysfunction affects an estimated 42 million individuals, with a higher prevalence among women. [2] Hypothyroidism is particularly significant in women of reproductive age, where it contributes to infertility and increases susceptibility to associated conditions such as PCOS. [3] PCOS is among the most common endocrine disorders, affecting 5–20% of women globally and 5–10% of women in India. [4] Characterised by irregular menstrual cycles, polycystic ovaries, hirsutism, and metabolic disturbances like insulin resistance and dyslipidemia, PCOS often remains underdiagnosed due to symptom overlap with other endocrine disorders, including hypothyroidism. [5]

In Ayurveda, although PCOS is not described explicitly, *Acharya Kashyapa's* description of *Pushpaghni Jataharini* (ovulatory disorders) correlates closely. [6] Other *Ayurvedic* concepts relevant to PCOS include *Artavakshaya* (reduced menstrual flow) and *Anartava* (absence of menstruation), arising from the vitiation of *Tridoshas* (regulatory functional factors of the body) and *Dhatu*s (major structural components of the body) such as *Rasa* (primary product of digested food), *Rakta* (blood tissue), and *Meda* (adipose tissue), along with obstruction in *Artava vaha srotas*. [7] Hypothyroidism, though not directly referenced, is interpreted through concepts like *Agnimandya* (digestive fire dysfunction),

particularly *Rasadhatwagnimandya* (diminution of metabolic factors located in tissues), and *Kapha-Medo Vikriti* (deranged metabolic factors), indicating systemic metabolic disturbance. [8]

This case is unique due to the patient's young age and the coexistence of two interrelated endocrine disorders, viz., hypothyroidism and PCOS, both of which are associated with insulin resistance, dyslipidemia, and chronic inflammation that disrupt the hypothalamic-pituitary-ovarian (HPO) axis. Especially, the condition was managed exclusively through classical *Ayurvedic* treatment without the use of hormonal therapy. The sustained clinical and biochemical improvement observed over a two-year follow-up emphasises not only the therapeutic efficacy but also the long-term safety, affordability, and relevance of Ayurveda, particularly in resource-limited settings.

2. CASE REPORT

A 17-year-old female student presented to the outpatient department (OPD No. 93, dated 13.04.2017) with complaints of irregular menstrual cycles, significant weight gain, loss of appetite, persistent fatigue, and excessive hair fall. These symptoms, progressively worsening over several months, were interfering with her academic and daily activities. Her menarche had occurred at 13 years of age with initially regular cycles (3–5 days at 28-day intervals). She reported no major past illnesses or long-term treatment use for the present condition or any other. Due to financial constraints, she was unable to afford extensive diagnostic investigations. Access to free consultation and treatment at the government-run Ayurveda hospital

thus provided crucial support, enabling her to receive timely and comprehensive care without additional financial burden.

Clinical Findings

Physical examination: Pulse: 70/minute; Blood Pressure: 110/70mm of Hg; Height: 150cms; Weight: 68kg; BMI: 30.22 kg/m²; Bowel: Constipated, once in two days; Micturition: 5-6 times/day; Built: moderately obese; Tongue: Coated; Pallor: Present; Icterus: Absent; lymphadenopathy; Cyanosis: Absent; Acanthosis nigricans: Absent; Acne and Hirsutism: Absent; Hair fall: Present.

Dashavidha pariksha (Ten-fold examination)

The *Prakriti* (physical constitution) of the patient is *Vatakaphaja* (*Vata* and *Kapha Dosha*), *Vaikruta dosha* (morbidly) is *Vatakaphaja*, with involvement of *Abhyantara roga marga* (internal disease pathways), with the origin from *Karna sira* (auditory pathway). The

patient *Samhanana* (compactness or tissue or organs), *Satmya* (compatibility), *Satva* (psychic condition), *Ahara shakti* (power of intake and digestion of food) and *Vyayama shakti* (power of performing exercise) were considered *Madhyama* (moderate state). *Vaya* (age group) is *Bala* (childhood- 17 years).

Diagnostic Assessment

Diagnostic reports indicated elevated Thyroid Stimulating Hormone (TSH) levels at 39.4 µIU/mL, confirming hypothyroidism and changes in uterine ultrasound, which revealed bulky ovaries with multiple follicles ranging from 13–18mm in size, consistent with Polycystic Ovarian Syndrome (PCOS).

Timeline & Therapeutic Intervention

The patient was managed according to an *Ayurvedic* protocol, combining internal medications and lifestyle modifications for six months, customized to her *Prakriti* (Table 1).

Table 1: Therapeutic Intervention

S.No.	Formulation	Dose	Route	Frequency	Duration
1	<i>Agnitundi vati</i> (AV) [9]	250 mg	Oral	1 tab with warm water, BID, after food	Every 15 days for 6 months with a gap of 15 days
2	<i>Kanchanara Guggulu</i> (KG) [10]	500 mg	Oral	1 tab with warm water, BID, after food	6 months
3	<i>Kumaryasava</i> (KA) [11]	15ml	Oral	1 tab with 30ml warm water, BID, after food	6 months

Pathya-Apathya (Dietary modifications) were advised in alignment with her constitution.

Follow-Up and Outcomes

The patient adhered consistently to the prescribed treatment plan. After three months of therapy, she experienced significant symptomatic relief, and her TSH levels decreased markedly from 35.62 µIU/mL to 6.46

µIU/mL. Patient was assessed before and after during every visit and clinical outcomes and compliance was noted. By the end of six months, a follow-up ultrasound revealed normalization of ovarian morphology. At two years of follow-up, her TSH levels remained stable at 5.86 µIU/mL, with no recurrence of symptoms. Notably, patient tolerated the current treatment well and no

adverse reactions or adverse events were observed throughout the course of treatment and during follow-up period of every 15 days. (Table 2 & 3)

Table 2: Assessment before and after treatment

Clinical Findings	Before treatment	After 3 months of treatment
Menstrual cycle	Irregular (+++)	Regular
Weight	Significant gain (+++)	5 kg reduction
Appetite	Reduced (+++)	Normalized
Fatigue	Severe (+++)	Resolved
Hair fall	Severe (+++)	Reduced
Constipation	Persistent (+++)	Resolved
Sleep	Disturbed (+++)	Sound sleep

Table 3: Diagnostic results before and after Treatment

Date	Test	Findings
Before Treatment		
13.04.2017	USG	Bulky ovaries, multiple follicles
03.05.2017	USG	Early/query borderline PCOS
05.05.2017	TSH	35.62 µIU/mL
After Treatment		
06.08.2017	TSH	6.46 µIU/mL
16.12.2017	USG	Normal ovaries, no cysts
12.05.2019	TSH	5.86 µIU/mL

3. DISCUSSION

The coexistence of hypothyroidism and polycystic ovarian syndrome (PCOS) is a clinically significant association that has garnered increasing attention due to the rising prevalence of these endocrine disorders among women of reproductive age. Hypothyroidism contributes to ovarian dysfunction through several mechanisms, including altered gonadotropin secretion, increased prolactin levels, and changes in sex hormone-

binding globulin (SHBG). Both of these conditions exhibit metabolic derangements, including weight gain, dyslipidemia, and hyperglycemia, further complicating their clinical presentation. Studies also indicate that thyroid dysfunctions, including subclinical hypothyroidism, are more prevalent in women with PCOS compared to the general population. [12]

Ayurvedic therapeutic interventions focus primarily on regulating metabolic and hormonal functions and improving digestion through *Vata anulomana* (evacuation of the flatus), *Amapachana* (digestion of metabolic toxins), and detoxifying the body through *Shodhana* (purificatory measures) and *Rasayana* (rejuvenating therapies), which is crucial for managing these conditions as both are the manifestations of *Agnimandya*, *Rasavaha sroto dushti* and *Kapha-Meda dhatu vikriti*. Hypothyroidism is primarily seen as a *Kapha-Vata* disorder with a profound disturbance in *Rasavaha Srotas* (circulatory channels), while PCOS is associated with the accumulation of *Kapha* and *Ama* (metabolic toxins) due to its *Snigdha* (unctuousness), *guru* (heavy), *Pichchhila* (sliminess) and *Abhishyandi* (oozing) properties which does *Uplepa* (coating) over the *Artavvaha srotas* causing *Artavapravritti* (increased menstrual flow) especially in the form of *Avarodha* (obstruction) and *Kastartava* (painful menstruation). Hence, the treatment protocol was advocated where the interventions help in managing the dual pathology of hypothyroidism and PCOS. The combination of *Agnitundi Vati*, *Kanchanara Guggulu*, and *Kumaryasava* was used to provide synergistic and targeted action. The *AV* enhances *Agni*, reduces *Ama*, and improves overall

digestion and metabolism, effectively alleviating fatigue, loss of appetite, and constipation. *KG* focused on correcting *Kapha-Medo Vikriti*, promoting hormonal balance, stimulating normal functioning of the thyroid gland, and reducing metabolic dysfunction, thereby addressing symptoms like weight gain and ovarian cysts. *KA* was used in treating Hypomenorrhoea and Oligomenorrhoea as it contains the main ingredient, *Kumari* (Aloe vera L.). It is a known *Artava Pravartaka* and *Pushpajanaka* (increases menstrual flow by regularising menstruation), a novel component for managing the Polycystic Ovarian Syndrome (PCOS), as it is basically indicated in *Rajorodha* (amenorrhoea). It acts as an adjuvant that regulates hormonal balance, and helps in improving digestion, metabolism by stimulating the impaired *Dhatwagni* (tissue metabolism), and also supports the overall reproductive health through its *Vrishya* property (aphrodisiac). There are also studies that have reported its angiogenesis and therapeutic effect on the ovaries. [13, 14]

As this is a coexisting condition of Hypothyroidism and PCOS, a long-term follow-up was necessary to serve as an important indicator to showcase the prognostic importance and disease management. A sustained observation for a period of 2 years provided critical insights into the patient's response to Ayurvedic management. Additionally, it was helpful in overcoming the diagnostic challenges involved in these types of chronic conditions, where repeated investigations, or imaging, are a must for assisting in clinical assessment and timely modification, especially in cost-conscious subjects, to support better patient compliance. This case

also helped in reporting the symptomatic relief, and hormonal management along with maintaining menstrual regularity and overall well-being. During management, the patient reported no adverse effects, emphasizing the safety of the current management. Hence, this case delivers the positive outcomes and highlights the potential of Ayurveda when monitored appropriately over time.

4. CONCLUSION

The Ayurvedic treatment approach for a period of six months with a follow-up of two years has given a good outcome with no adverse events. Remarkable improvement in clinical findings such as abnormal menstrual cycle, weight gain, reduced appetite, fatigue, increased hair fall, persistent constipation, and disturbed sleep was noted. Biochemical improvements and normalisation of ovarian morphology on ultrasonography were also observed. This successful management of a chronic case of coexisting PCOS and hypothyroidism emphasises the importance of Ayurvedic treatment and long term follow-up in evaluating the sustained therapeutic benefits and overall patient well-being, accentuates the potential of Ayurvedic treatment.

Declaration of Patient Consent – The authors confirm that they have acquired a patient consent form, in which the patient or caregiver has granted permission for the publication of the case, including accompanying images and other clinical details, in the journal. The patient or caregiver acknowledges that their name and initials will not be disclosed, and sincere attempts will be undertaken to safeguard their identity. However, complete anonymity cannot be assured.

Patient perspective - Before starting treatment, I was experiencing several distressing health issues, like my periods were irregular, I was

gaining weight rapidly, constantly felt tired, had significant hair loss, and had almost no appetite. These symptoms started interfering with my studies and daily life. As a student living away from my family, financial constraints were a significant concern for me. Although I had heard about conventional treatments, I had not started any because I was afraid of the long-term side effects of hormonal medications and, more importantly, I simply could not afford them. The recommended tests after my initial diagnosis, like high TSH levels and PCOS, were financially burdensome. I was worried and felt stuck, unsure of how to proceed. That is when I came to this government-run Ayurveda hospital, where consultations and treatment are provided entirely free of cost. This was a huge relief for me. With regular Ayurvedic care, I gradually began to feel better without any noticeable adverse effects even after using these medicines for a long time. Within a few months, my appetite improved, I felt more energetic, my hair fell less, and my periods became regular. Even my lab results began to show improvement. This treatment not only helped me without any side effects, but also removed the financial burden. Thanks to this, I have regained my health and refocused on my studies and daily life confidently.

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