

## Ayurvedic Management of Polycystic Ovarian Syndrome (PCOS) with Submucous Uterine Fibroid in Obese Patient - A Case Report

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### ABSTRACT:

Polycystic Ovarian Syndrome (PCOS) means ovarian dysfunction along with cardinal features of hyperandrogenism and polycystic ovarian morphology, also known as ovarian hyperthecosis. It is the foremost cause of anovulation and infertility. Uterine fibroids are benign monoclonal neoplasms of the myometrium, representing the most common tumors in women worldwide. Several studies have found an association between obesity and an increased incidence of uterine leiomyomas. Obesity is a common finding in PCOS as well. This case explores the Ayurvedic management of obese PCOS with submucous fibroid. A case of 37 year old female complaints of irregular, delayed and scanty menses since 3 years and weight gain of 6 Kg since 1 year diagnosed as PCOS by revised Rotterdam criteria (2003) with obesity (BMI- 34.80). After 3 months submucous fibroid was diagnosed as per USG finding. Patient was treated successfully for 6 months by *shodbhana chikitsa* including *deepana*, *pachana* with *Aampachana vati 2 vatis* of 500 mg BD before food with luke warm water for 7 days followed by *nityavirechana* with *Erandabbrusht Haritaki* 5gm at night with lukewarm water followed by *shamana oushadhis* including *Kulathadi kashaya* 40 ml empty stomach BD morning- evening with 1g *Yavakshara* as *Prakshepa* and *Shatapushpa churna* 5 gm before food BD with lukewarm water for 7 days. After 6 months of treatment her menstrual cycle got regular, weight loss of 21 kg and complete resolution of cyst and submucous fibroid attained.

**KEY WORDS:** Irregular Menses, *Kulathadi kashaya*, Obesity, PCOS, *Shatapushpa churna*, Submucous fibroid.

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## INTRODUCTION:

PCOS, or polycystic ovarian syndrome, is frequently seen in women of reproductive age and is the most prevalent endocrinological and metabolic disorder. Even though the exact cause is unknown, The origin, prevalence, and modulation of the PCOS phenotype may be affected by environmental pollutants, diet and lifestyle choices, genetic factors, obesity, and gut dysbiosis.<sup>[1]</sup> Three principal characteristics of the pathophysiology of PCOS have been identified to date: an interaction between reproductive dysfunction and metabolic disorders, high familial aggregation and heritability, and a substantial contribution of environmental factors.<sup>[2]</sup> The diagnosis of PCOS is essentially based on three features which include the presence of hyperandrogenism, menstrual irregularity and polycystic ovaries.<sup>[3]</sup> Women with polycystic ovary syndrome may have elevated levels of testosterone, oestrogen, luteinising hormone, insulin and anti-müllerian hormone.<sup>[4]</sup>

While obesity is a known risk factor for PCOS, not all women with obesity develop PCOS and not all women with PCOS are obese.<sup>[5]</sup> Around 30–70% of women, belonging to diverse ethnicities, are affected by PCOS and obesity.<sup>[6]</sup> On the other hand, 20–50% of women with PCOS are normal weight/lean and the pathophysiology may vary in these two phenotypes.<sup>[7]</sup>

The factors associated with PCOS such as anovulation, insulin resistance and altered steroid genesis are known to increase the risk of cancers in females with PCOS.<sup>[8]</sup> Amongst the reproductive cancers, clinical studies have reported that women suffering from PCOS have a higher risk of suffering from endometrial cancer<sup>[9]</sup> followed by ovarian cancer.<sup>[10]</sup> The mortality rate of ovarian cancer for women who are suffering

from obesity and PCOS women is higher as compared to lean women.<sup>[11]</sup> Although few studies have suggested that the obesity and anovulation in PCOS women can increase the risk of breast cancer<sup>[12-13]</sup>, the association of breast cancer and PCOS is undecided.<sup>[14]</sup> Despite the existence of many effective medications and therapies, many women with PCOS still experience suboptimal outcomes. While trials involving traditional western therapies are warranted, it is important to also explore complementary and alternative treatments.

Uterine fibroid is another entity which is the most common benign neoplasm of the uterus, affecting up to 68.6% women.<sup>[15]</sup> Fibroids are extremely heterogeneous in terms of pathophysiology, size, location, and clinical symptoms.<sup>[16]</sup> While some women have no symptoms, others experience dysmenorrhea or hypermenorrhea. The most common presenting symptom is heavy menstrual bleeding, which may lead to anemia, fatigue, or painful periods. Other possible symptoms include lower back pain, pelvic pressure or pain, and pain during intercourse. In the presence of fibroids beyond a certain size, pressure on the bladder or bowel may result in increased micturition frequency or retention, pain, or constipation. Uterine fibroids may also be associated with reproductive problems such as infertility, recurrent pregnancy loss, and adverse obstetric outcomes.<sup>[17]</sup>

Although the cause of uterine fibroids is largely unknown, genetic and epigenetic factors influence the risk of development of uterine fibroids, like age, race and ethnicity, family history, body mass index, early-life environmental exposure to toxins, or vitamin D deficiency. Although the mechanisms by which vitamin D exerts its effects in fibroids are conveyed through the regulation of gene expression, some of these

effects are also mediated by the modulation of intracellular signaling pathways, thus suggesting that vitamin D is directly or indirectly connected to multiple cellular processes.<sup>[18]</sup>

Traditionally, fibroids are classified by their location in the uterus. They may be divided into cervical, submucosal, subserosal, and intramural fibroids.

In last few decades, pharmacologic agents are used to provide relief for fibroid patients with mild symptoms, including combined oral contraceptives, progesterone (by oral, injection, or intrauterine device), and nonsteroidal anti-inflammatory drugs, antifibrinolytics, gonadotropin-releasing hormone agonists, selective estrogen or progesterone receptor modulator progestin, danazol, and aromatase inhibitors. Some of these medications are also useful in reducing tumor growth. But still, there is no any gold stranded treatment option being developed for this common condition. In this context, various complementary and alternative medicine treatments have been administered for the uterine fibroids amelioration process.<sup>[19]</sup>

In Ayurveda PCOS can be correlated with *pushpaghni jataharini* described in *Kashyapa samhita*. *revati kalpadhyaya* bears resemblance with the feature of PCOS. Uterine fibroids can be correlated with *granthi roga*. The appropriate treatment protocol in *babudoshavastha* would be to first undergo *shodhana* followed by *shamana chikitsa*. *Vata kapha shamaka* drugs has to be used. *Garbhashaya Shodhaka* may helpful in shedding of the endometrium resulting in menstruation. Drugs due to *ushna, tikshna guna*, remove *Srotoavarodha* (obstructive pathology occurring in channels), decreases *Medodhatu* and improves *Dhatu* metabolism by eliminating.

### CASE HISTORY:

A 37 year old married female with complaints of irregular, delayed and scanty menses since 3 years and weight gain of 6 Kg since 1year came to PTSR OPD, ITRA, Jamnagar 06/09/22. The patient's last menstrual period was on 04/09/2022, and she reports having irregular menstrual cycles. The duration of her periods is typically 3-4 days, with an interval of 38-45 days between cycles. She experiences mild pain during her periods but does not have any clots. The amount of bleeding is scanty, requiring only 1 pad per day. In terms of general examination, the patient has a height of 153 cm and a weight of 82 kg, resulting in a BMI of 34.40 kg/m<sup>2</sup>. Her waist-hip ratio is 0.86, and her blood pressure is 120/90 mmHg.

In Systemic examinations, Central nervous system: patient was conscious & well oriented to time, place & person. Cardiovascular system: S1 & S2 heard, no abnormal sounds on auscultation. Respiratory system: Chest B/L symmetrical, clear, no added sounds on auscultation. Per abdomen: soft, non-tender. She was diagnosed as PCOS by revised Rotterdam criteria (2003) with obesity (BMI- 34.80). After 3 months Submucous fibroid was diagnosed as per USG finding.

### Diagnostic focus and assessment:

**Investigations:** The biochemical investigations are shown in table-1. The USG findings are shown in table-2 and table-3.

### TREATMENT GIVEN:

Treatment protocol includes both *shodhana* and *shamana* management was given as

mentioned in table 4 and table 5 respectively.

The patient was advised to make fresh *kashaya* of about 40 ml from 20gm *yavakut* and after straining to add 1gm of *Yavakshara churna* as *prakshepa*. She was also advised to do physical exercise daily for 30 minutes like *suryanamaskara*, other *yogasanas*, *pranayama* and to follow *pathya- apathya*. *Pathya* advised were, intake of boiled water, light food and *apathya* fried food, junk food, cold items etc.

### Outcome

After 3 months of treatment Serum cholesterol was reduced to 185 mg/dl,

serum triglyceride to 63 mg/dl and FBS to 87 mg/dl. The biochemical investigations before and after treatment are shown in table-6. After 6 months of treatment her menstrual cycle became regular with 15kg weight reduction. The menstrual history before and after treatment are shown in table-7. The BMI before and after treatment are shown in table-8. Her USG revealed reduction in volume both ovaries, complete reduction of submucous fibroid with no cyst in ovaries. The USG findings before, during and after treatment are shown in table-9 and figure-1.

**Table 1: Biochemical Investigation (07/09/2022)**

FBS (mg/dl)	91
S. Cholesterol (mg/dl)	227
S. Triglyceride (mg/dl)	123

**Table 2: USG (06/09/2022)**

		Volume
Right Ovary	Cyst 32× 33mm	24cc
Left Ovary		12cc

**Table 3: USG (09/12/2022)**

		Volume
Right Ovary	No e/o cyst	10cc
Left Ovary		10.2cc
Others	Mild Adenomyosis Submucous fibroid sized 12× 10mm	

**Table 4: Shodhana Chikitsa**

Treatment	Drug & Dose	Duration
<i>Deepana, pachana</i>	<i>Aampachana vati</i> 2 <i>vatis</i> of 500 mg BD before food with luke warm water	7 days (upto <i>samyak jirna lakshana</i> )
<i>Nitya virechana karma</i>	<i>Erandabhrusht Haritaki</i> 5gm at night with lukewarm water	7 days

**Table 5: Shamana chikitsa**

Drug	Dose and <i>anupana</i>	Duration
<i>Kulatthadi kashaya</i>	40 ml empty stomach BD morning- evening with 1g <i>Yavakshara</i> as <i>Prakshepa</i>	6 months
<i>Shatapushpa churna</i>	5 gm before food BD with lukewarm water	

**Table 6: Biochemical Investigation BT and AT**

Investigations	BT (07/09/2022)	AT (09/12/2022)
FBS (mg/dl)	91	87
S. Cholesterol (mg/dl)	227	185
S. Triglyceride (mg/dl)	123	63

**Table 7: Menstrual History BT and AT**

	BT	AT
Regular/ Irregular	Irregular	Regular
Duration	3- 4 days	4-5 days
Interval	38- 45 days	28-30 days
Pain	Mild pain present	Mild pain present
Clots	Absent	Absent
Amount	1 pad/ day	2 pads/ day

**Table 8: BMI BT and AT:**

Parameter	BT	AT
Height	153 cm	153 cm
Weight	82 kg	67 kg
BMI	34.4 kg/m <sup>2</sup>	28.95 kg/m <sup>2</sup>
Waist hip ratio	0.86	0.82

**Table 9: USG BT, DT and AT**

	BT (06/09/2022)	DT (09/12/2022)	AT (01/05/2023)
Right ovary	Volume 24 cc Cyst 32× 33mm	Volume 10 cc	Volume 8.2 cc
Left ovary	Volume 12 cc	Volume 10.2 cc	Volume 8 cc
Others		Mild Adenomyosis Submucous fibroid sized 12×10 mm	Mild Adenomyosis No e/o Submucous fibroid

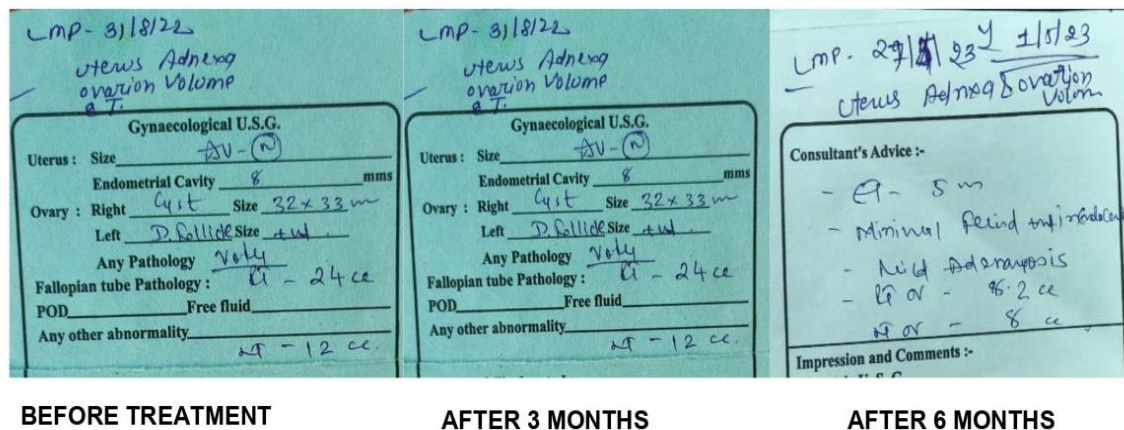


Figure- 1: USG Images

### DISCUSSION:

In this case, obesity, PCOS and uterine fibroid we can consider as *santharpanajanya*. *Aama* formation and *kapha prakopa* cause *rasa dushti* & *srotosanga* leads to *dushti* of *artavanaha srotas* which was manifested as *yathochita kala adarshana* (prolonged interval) & *alpata*. In the *samprati* (pathogenesis) of *granthi*, it is mentioned that *mamsa* (muscle fibers), *rakta* and *medo dhatu* are vitiated. Several studies have found an association between obesity and an increased incidence of uterine leiomyomas.<sup>[20]</sup> Obesity is a common finding in PCOS as well. Since all these conditions viz., PCOS and uterine fibroid have some association and share some common *samprapti*, selection of treatment protocol was not challenging. We required *deepana*, *pachana*, *srotoshodhana*, *medovilayana*, *lekhana*, *shothabara* and *apatarpana* properties to break the *samprapti* and *nidana* of this condition and the selection of treatment protocol and drugs were based on this. Since it was a *babudosh*a condition with involvement of deep seated *dhatu*s *shodhana* was planned prior to *shamana aushadhis*. As *yonivyapad* and *granthi* are *virechanasadhya* *rogas*, *nityavirechana* with *Eranda* and *Haritaki* is selected for *shodhana*. *Eranda* and *Haritaki* are *anulomana* which might have helped in

regularizing the menstrual cycle. *Haritaki* itself is a *sthoulyahara aushadha*. *Kulathbadi kashaya* has *medonashaka* action due to *laghu*, *ruksha*, *tikshna* & *ushna guna* which is very necessary for patient of PCOS as obesity is the main factor. Most of the drugs of *Kulathbadi kashaya* has *sothabara* properties which acts as anti-inflammatory action<sup>[21,22,23]</sup> on body tissues & helps in reduction of cyst and fibroid.

Considering the *dosha* vitiation, we can identify *kapha vata avarna* (~obstruction of vata due to kapha) and qualitative derangement of *pitta* may occur here, resulting in the abnormalities of the menstrual cycle.<sup>[24]</sup> *Shatapushpa choorna* has *tikta rasa*, *ushna veerya* & *agneya guna* & has *deepana-pachana*, *lekhana* properties, which corrects *mandagni* and works on *aavarana* & decrease *picchila* and *kleeda* properties of *kapha dosha*. It increases the blood circulation in the *yoni* and *garbbhashaya*, which helps formation of healthy endometrium and thus menstrual cycle becomes normal in amount, duration and interval.<sup>[25]</sup> *Shatapushpa* mainly contains phytoestrogens which have mixed estrogenic and anti-estrogenic action<sup>[26]</sup>, depending on target tissue. *Shatapushpa* by its phytoestrogenic properties brings down the levels of insulin resistance

in the body and restore the cellular imbalance that is a major cause of PCOS.

### CONCLUSION:

This case report demonstrates the safe and effective management of obese PCOS with submucous uterine fibroid through Ayurvedic treatment modalities. Since it is a metabolic syndrome exercise and *pathya-apathya* has equal importance along with *shodhana* and *shamana* treatments. Even though the treatment protocol succeeds in management of the disease condition, it is mere a case report and further studies with appropriate research design is necessary for the scientific validation.

### Declaration of the patient consent:

The written informed consent has been taken from patient for procedure and publication of case without disclosing the identity of patient

**Conflict of interest:** Author declares that there is no conflict of interest.

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