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Case Report

Ayurveda management of large endometrioma – A case report

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A B S T R A C T

Endometriosis is an unusual feature of retrograde menstruation that affects nearly every woman of reproductive age. Endometrioma, a severe form of endometriosis, is a common cause of infertility. Surgery is the recommended treatment for large endometrioma, which most women prefer to avoid.

A 23-year-old unmarried patient had right side rapidly enlarging endometrioma measuring 6.9 × 5 cm with acute intermittent abdominal pain diagnosed as *udavarta yonivyapada*. *Yoga basti* (eight medicated enemas) and Kuberaksha *vati* were the primary treatments. *Yoga basti* is the treatment of choice for pain, inflammation and all the pelvic diseases related to fertility caused by *vata* aggravation. Alleviation of pain avoided the surgery. After discontinuation of medicines, the endometrioma size increased to 10.3 × 5.5 cm The second *Yoga basti* was administered before wedding. The patient conceived within four months after the marriage and had a full-term normal delivery with no acute pain episodes. The endometrioma size was reduced by 2 cm within one year and further reduced to 7.6 × 5.2 cm in the first trimester.

Ayurvedic conservative treatment for endometriosis can manage pain and may also prevent retrograde menstruation. It can be a minimally invasive alternative prior to surgical removal, that has long-term beneficiary effects. As a seasonal regimen, *yoga basti* can also help fertile women with primary and secondary dysmenorrhea enhance the quality of life.

1. Introduction

Endometrioma, or chocolate cyst, is a severe form of endometriosis observed in around 2–10% of all women of reproductive age. Out of that, 50% of women need infertility treatment. Retrograde menstruation, an imperative cause of endometrioma, is a general feature observed in fertile women [1]. Many theories have been put forward to explain infertility due to endometrioma, including decreased ovarian reserve [1,2]. Endometriosis causes a decrease in antral follicle count (AFC) and anti-Mullerian hormone (AMH) and elevates follicular stimulating hormone (FSH) in the serum. Decreased AMH and increased FSH affects the overall ovarian reserve of two gonads. In unilateral ovarian endometrioma, AFC and the size of the cyst are directly related to ovarian reserve damage. About 70% of women complain of cyclic pain, dysmenorrhea, dyspareunia, and painful defecation. Affordability of diagnostic sonography, MRI, and laparoscopy is a commonly observed issue [1]. Medical treatment for endometrioma includes pain management and hormonal treatment. However, large cysts >4 cm require surgical excision due to the risk of ovarian torsion, cyst rupture, cyst progression, ectopic pregnancy, and threatened abortion [3]. The beneficiary effect of surgical excision of endometrioma is controversial. Apart from unintentional damage to healthy ovarian tissue, surgical excision of endometrioma declines ovarian function and ovarian reserve leading to infertility. Recurrence is predictable in 5–15% of cases, even after hysterectomy and bilateral oophorectomy [4].

Ayurveda describes retrograde menstruation as *udavarta yoni vyapada*, a cause of infertility [5]. It is a *vata dosha* (the fundamental unit of physiologic regulation) dominating disorder and is primarily treated with *basti* (medicated enema). *Basti* is also a primary treatment for PCOS and infertility. It is a seasonal regimen for controlling *vata* vitiation in prenatal and postnatal care [6].

2. Patient information

A 23-year-old *vata* dominant *pitta prakriti,* unmarried bank employee, complained of acute intermittent abdominal pain for the

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last four months. For almost six months, the patient suffered painful defecation, dysmenorrhea, and breast tenderness. The sonography revealed right-side endometrioma measuring 6.9 × 5 cm with a normal-sized left ovary. Surgery was the only option after a three-month course of hormone therapy and pain relievers. In any case, the parents were adamant about not having surgery before the wedding.

2.1. Darshana

She had a trim physique, thin hair, and weighed 38 kg (BMI was 16.2 kg/m^2).

2.2. Sparshana

Abdominal palpation: tenderness in the right fornix.
Breast palpation: no palpable lump, no nipple retraction.

2.3. Prashna

For the previous six months, the patient had dysmenorrhea with increasing periodic intensity and constant mild breast discomfort without breast discharge. Before menstruation, the breast pain became more intense.

***Ahara* and *Vihara* (diet and daily regime):** The patient's lifestyle and the eight to 10 h of work were sedentary and without stress. The patient had fixed meal time and 8 h of sleep. The patient was taking four small meals addition to lunch and dinner. She had tried protein powders, Shatavari (Asparagus Racemose) and other weight gaining diets together with gymnasium exercises for two years without expert consultation. Her appetite was good, and there was no history of indigestion. The patient also had increased urine frequency and painful, irregular defecation.

2.3.1. Medical history

There was no history of leucorrhea, or abdominal surgery, or any significant illness. The CA 125 blood test was negative. The uterus was retroverted.

2.3.2. Menstrual history

The patient had a regular 28-day menstrual cycle with 4–5 days of bleeding. There were no complaints of unusual smell or colour of menstrual bleeding or clots. Her age at menarche was 14years.

2.3.3. Family history

There was no family history of ovarian cyst or cancer. Her mother and elder sister also had a regular menstrual cycle.

2.4. Diagnosis

Few other features, like *vata* dominant constitution of *vatala yonivyapada, vimargagamana*, the general feature of *srotodushti*, without *artavadushti*, and *kapha* dominant diet, taken for weight gain, causing *kaphavrutta vata,* were also considered. The frequent urination was due to the cyst pressure on the bladder than *kaphavrutta vata*. The diagnosis was *udavarta yonivyapada* Table 1.

2.5. Prognosis

The American Fertility Association (AFS) determined the severity of endometriosis. Large endometrioma with severe pain require surgical treatment [1].

3. Therapeutic intervention, follow-up and outcomes

Ayurveda describes retrograde menstruation as *udavarta yonivyapada*. It is an anomaly in the expulsive function of *apana vata* that causes extreme pain that relives after menstruation. The treatment plan for *udavarta yonivyapada* includes warm and *vata*-pacifying diet, *shehana* (medicated massage), *swedana* (sudation), *anuvasana,* and *uttar basti* (medicated oil enema and intrauterine oil administration) with *vatashamak* (*vata* pacifying) oil for *vata-nulomana* (achieving natural course of *vata*) [5]. To relieve the pain, ayurvedic medication was combined with *yoga basti* (a series of eight medicated enemas) for *anulomana* (aperients) and *apana vata* derangement. The hesitation about taking *yoga basti* ended after the administration of initial *matra basti* (oil enema) on the first appointment. After the course of *yoga basti,* the pain was significantly reduced. During menstruation, daily activities were no longer remain the strenuous tasks. The medication continued for two and a half months. To boost her chances of conception, the patient promised to take *yoga basti* every monsoon until her conception. The medication was stopped once the surgery was cancelled, and after three months, the endometrioma size increased to 10.3 × 5.5 cm. The patient, however, was unwilling to take medicines in the absence of pain (the pain intensity reduced from acute to mild), and continued only with Kuberaksha *vati*. After 15 months, the patient returned for *yoga basti* in the monsoon, three months before her wedding, and was advised to avoid contraception after her wedding. Eight weeks of medication alleviated *indralupata* (alopecia areata) observed during *Sharada rutu* (autumn). It was an ovular one-inch bald patch on the occipital region without skin pathology. The patient never complained of dyspareunia and conceived within four months after the marriage. The size of the cyst was 7.6 × 5.2 cm in the viability sonogram. The patient gave birth to a healthy baby after a full-term normal delivery (FTND) in a government hospital without any maternal complications related to the cyst Table 2.

Instructions: Warm home-cooked meals, warm water, and avoiding gym exercises were recommended, particularly before and during menstruation. Fermented food, bakery products, and curd were all prohibited. The same tablets (Kuberaksha *vati* and Chadraprabha *vati*) were instructed to be chewed thoroughly in cases of acute pain. To lower pain intensity, a single *matra basti* was advised three to four days before menstruation and perinatally, but it was never used.

3.1. Basti preparation

Oil *basti*: warm Sahachara oil 60 ml and 1 gm *Saindhava* (rock salt).

Niruha basti: 60 ml of Honey, 5 gm *Saindhava*, 60 ml of sesame oil. This mixture was added to 500 ml of warm Dashmoola decoction.

Administration days:

Oil *basti*: The first, second, fourth, sixth and eighth day.

Pratygama kal (time of expulsion) of the first *basti* was 4 h that gradually increased to 6–8 h.

***N. basti*:** the third, fifth and seventh day.

P. kal (time of expulsion) of the *N. basti* was 10–15 min.

4. Discussion

The patient in the case study represents the inconsistent and self-medicating patient, often seen in clinical practice. In addition, the patient benefited from minimal intervention based on the *vata* predominance theory in gynaecological disorders and *basti* as the standard treatment. Surgical excision of a large cyst is required to

Table 1
Differential diagnosis.

Related Disease and *srotodushti* (deformity of the channel)	Associated Symptoms	Diagnostic feature
Udavarta Yonivyapada	Retrograde menstruation	Detected
Vatala Yonivyapada	*Vata prakriti*, dysmenorrhea	Detected
	Irregular menstruation	Not detected
Artavavaha srotodushti	*Vimargagamana* (altered direction)	Detected
	Artava dushti (variation in colour, smell, quantity or frequency of menstrual bleeding)	Not detected
Shukravaha srotodushti	Breast pain	Detected
	Beeja dushti (anomaly of gametes)	Not detected
Rasavaha srotodushti	*Stanaya* (breast discharge) or *Artava dushti*	Not detected
Vyanavrutta apana	*Udavarta*,	Detected
	gulma (tumour)	Not detected
Kaphavrutta vata	Increased urine frequency,	Detected
	Kaphaja prameha	Not detected

Table 2
Timeline of the therapeutic intervention and diagnostic tests.

Date	Treatment	Action	Doses	Duration	Cyst size and USG date
					5.5 × 3.9 cm 28/06/2014
					6.9 × 5 cm 30/10/2014
2/12/2014 First visit	Sahachara oil *matra basti* (Nagrjuna Company, Kerala)	*Darun vatahara, raja-shukra doshahara, apatya janani*	60 ml		
2–9/12/2014	*Yoga basti**	*Dashmoola Kwatha- yoni shoola*	Eight *basti*	Eight days	
	Aampachak *vati* (Bagewadikar Rssashala, Solapur)	*Aampachak*	250 mg twice After food	Eight days	
2/12/2014 -20/02/ 2015	Kuberaksha *vati* (Vidyanand Lab Pvt. Ltd.)	*Shoolahara, vibandhahar*	500 mg twice After food	80 days	
	Chandraprabha *vati* (Bagewadikar Rssashala, Solapur)	*Artava ruja, shukradhatugata roga, vrushya*	250 mg twice Before food	80 days	
	Avipattikar *choorna*	*Pittahara, anulomak*	1 gm at bedtime	80 days	
March–May 2015	No medicines			Three months	10.3 × 5.5 cm 28/05/2015
June 2015–Sept. 2016	Kuberaksha *vati*		500 mg twice daily	16 months	8.4 × 6.2 cm 6/07/2016
14/072,016 -21/07/ 2016	*Yoga basti*			Eight days	
28/09/2016 -21/12/ 2016	Asthimajjapachak yoga (Rudra Ayurvedic Aushadhalaya, Dombivali)	*Pittahara*	500 mg twice	Eight weeks	
	Laghoo sootshekhar (Bagewadikar Rssashala, Solapur)	*Pittahara*	250 mg twice	Eight weeks	
	Avipattikar *choorna* (Bagewadikar Rssashala, Solapur)		1 gm at bedtime	Eight weeks	
During pregnancy					7.6 × 5.2 cm 28/04/2017
After delivery					4.7 cm 14/07/2018

treat pain, infertility and cyst related complications during pregnancy. Apart from marital status and financial constraints, fear and uncertainty about surgical treatment are other significant factors for surgical apprehension [1].

Kuberaksha *vati* is composed of *Hingu* (asafetida root resin extract), *Latakaranj* (*Caesalpinia bonduc*), *Shunthi* (*Zingiber officinale*), black salt and *rasona* (*Allium sativum*). *Hingu* and Chandraprabhavati eliminate pain. Black salt, *shunthi* and *hingu* are *vibandhahara* (remove the obstruction of dosha). *Latakaranj* and Chandraprabhavati are *shothhar* (anti-inflammatory). All the medicines are *vata kpahahara* and *anulomaka* which maintain the proper functioning of *apana vata. Yoga basti* was started from the first day of the visits without any *shodhana* (purification therapy); hence aampachak *vati* was given. Pain, inflammation and pelvic diseases connected to fertility induced by *vata* aggravation are treated with *basti.* [7–10] Pro-inflammatory cytokines like IL-6 (which are highly sensitive to endometriosis) are also downregulated for a more extended period [10]. *Yoga basti,* as a seasonal regimen, regulates expulsive functions of *vata* such as defecation, menstruation, ovulation, and fetal expulsion. Pain relief was achieved after the first *yoga basti*, avoiding the need for surgical removal of the endometrioma. The patient conceived naturally without assisted reproductive technology (ART) and underwent FTND without complications due to the large cyst.

Patients with endometriosis are prone to develop alopecia areata (*indralupta*) [11]. Considering the *pitta* aggravation due to *Sharada Rutu* and consumption of just Kuberaksha *vati*, the patient was given Laghoo Sootshekhara, Asthimajjapachak yoga, and Avipattikar powder for generalized and local pitta aggravation, and for *anulomana* (laxative) respectively [12]. There were no additional indicators of *pitta* aggravation. In addition, the patient completed eight weeks of *indralupta* medication in twelve weeks, making it difficult to determine the constancy of Kuberaksha *vati*. It was not, however, discontinued throughout the treatment of *indralupta*.

According to Ayurveda and biological research, the common risk factors for endometriosis are diet, lifestyle, and genetics [1,5]. Other risk factors include a low BMI and late menarche that are noted [13,14]. *Vata kapha* is aggravated by abrupt lifestyle changes such as a high protein diet, Shatavari, workouts, and frequent eating. A high protein diet via glycoproteins (FSH, LH and TSH) and Shatavari can escalate estrogen production, a cause of endometriosis [1,15]. However, Shatavari is used to treat PCOS and infertility to control hormonal imbalance [15]. The concomitant effect of protein powders and Shatavari is not studied; however, it could be a source of breast pain other than oral contraceptive therapy [1].

Kuberaksha *vati*, Chandraprabha *vati* and Dashmoola decoction and Sahachara oil for *basti* can reduce pain and preserve fertility.

5. Conclusion

Comprehensive ayurvedic treatment can be an affordable option for endometriosis pain management before expensive interventions with no long-term benefits. *Yoga basti,* as a seasonal regimen, can also help fertile women with primary and secondary dysmenorrhea enhance their quality of life.

Patient perspective

The patient shared her perspective in her local (Marathi) language. Her lower abdomen acute pain was significantly reduced after the course of Yoaga Basti. Herself and her parents were delighted when the gynaecologist canceled the surgical removal of the cyst. Also, she never had acute pain episodes during the pregnancy.

Informed consent

Informed consent was taken from the patient for this study.

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Conflict of interest

None.

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