



CASE REPORT

Ayurvedic management of varicocele associated with oligoasthenozoospermia and erectile dysfunction: A Case Report

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Abstract

Introduction : Varicocele is a common cause of male infertility and is often associated with oligoasthenozoospermia and erectile dysfunction. Although surgery remains the mainstay of conventional management, recurrence and unresolved functional issues still present challenges. Ayurveda offers a distinct perspective by correlating varicocele with *siragranthi* in *vrishana*, attributed to *vata-pitta* vitiation and the management is directed towards *dosha shamana* (particularly *vata* and *pitta*), *rakta shodhana*, and therapeutic measures aimed at restoring normal vascular integrity and improving local circulation.

Case Presentation : A 40-year-old male with primary infertility of 12 years presented with bilateral varicocele, scrotal pain, oligoasthenozoospermia, and erectile dysfunction. The condition was diagnosed as *siragranthi* of *vrishana* and, based on the basic principles of Ayurveda, managed through *rookshana*, *snehapana*, *virechana*, *yogavasti*, *raktamokshana*, and *shamana* therapies using classical formulations.

Outcome : After 2 months of treatment, the patient showed marked improvement in semen parameters (from 12 million/ml to 75 million/ml), erectile function (IIEF-5 score improved from 12 to 22), and complete resolution of the right-sided varicocele. Pain and scrotal heaviness subsided significantly, and the left-sided varicocele showed partial improvement.

Conclusion : This case illustrates the potential efficacy of individualized Ayurvedic treatment in addressing varicocele-associated reproductive dysfunction. A multidisciplinary approach focusing on *dosha* pacification, *dhatu* nourishment, and *srotoshodhana* can offer substantial clinical benefits. Further controlled studies are warranted to substantiate these findings.

Introduction

Varicocele, affecting approximately 15–20% of men, is characterized by an abnormal enlargement of the pampiniform venous plexus within the scrotum^[1]. Oxidative stress, scrotal hyperthermia, and venous reflux are central to its pathophysiology, compromising sperm production and function^[2]. These factors progressively impair sperm quantity, quality, and morphology, manifesting as oligoasthenozoospermia (OAT) syndrome, and, over time, result in reduced fertility. Varicocele is also significantly associated with low testosterone levels and erectile dysfunction^[3]. Among the most common complications of untreated varicocele is elevated testicular temperature, which may lead to testicular atrophy and irreversible infertility.

Although a direct correlation with Ayurvedic pathology is not established, varicocele closely resembles *siraja granthi* in *vrishana*, as described in classical Ayurvedic texts^[4].

PATIENT INFORMATION

A couple with primary infertility for 12 years presented to the Prasutitantra and Striroga OPD, Government Ayurveda College, Thiruvananthapuram, on 03/10/2023. The 40-year-old male partner reported occasional premature ejaculation persisting for 12 years, along with pain and heaviness in the scrotal region occurring frequently for the past 9 years.

HISTORY OF PRESENTING COMPLAINTS

Following marriage in 2011, the patient experienced difficulty in maintaining an erection adequate for successful sexual intercourse. Subsequent medical evaluation revealed low sperm count and reduced motility, along with Grade I-II left-sided varicocele. He subsequently underwent varicocelectomy in March 2014.

Post-surgery, he gradually developed pain and heaviness in the scrotal region, especially after activities such as weightlifting at the gym, riding a motorbike, or during sexual intercourse. Despite consulting multiple allopathic physicians, he experienced no relief.

On 03/10/2023, he consulted Prasutitantra and Striroga OPD of Government Ayurveda College, Thiruvananthapuram, for the aforesaid complaints. He was diagnosed with *siraja granthi* in *vrishana* and was subsequently admitted in our hospital for further treatment and care.

HISTORY OF PAST ILLNESS

His medical history revealed recurrent urinary tract infections (UTIs), gastritis, and a recent diagnosis of Grade II fatty liver.

FAMILY HISTORY

A notable family history of varicocele was present - three of his siblings were diagnosed with the condition, one of whom underwent surgical correction, following which his spouse conceived.

SURGICAL HISTORY

History of varicocele surgery 9 years prior, with no improvement in fertility outcomes.

PERSONAL HISTORY

Appetite : Increased (rarely diminished)
 Bowel : Regular, often loose consistency
 Micturition : Normal (H/O Recurrent UTI)
 Sleep : Sound (Habit of sleeping late)
 Exercise : Occasionally (Brisk walk) (Pain while lifting weights in the gym. Hence discontinued)
 Addiction : Nil (History of smoking 16–20 cigarettes per day for approximately 9 years; quit 12 years ago)
 Allergy : Recurrent erythematous patches on exposure to sun, sweat, and dust since childhood
 Habits : 6 - 7 cups of black tea or milk tea daily.
 Dietary habits revealed frequent intake of untimely meals, with a preference for non-vegetarian, spicy foods, including tomatoes, paneer, pickles, chicken fry, fish fry, and bread-based items.

CLINICAL FINDINGS

The patient was of moderate build with a Body Mass Index (BMI) of 24.82 kg/m². On physical examination, bilateral scrotal

swelling with tenderness was noted, and dilated veins were palpable.

INVESTIGATIONS

Scrotal Ultrasound and Doppler study conducted on 14/08/2023 revealed:

- Grade III–IV varicocele on the left side
- Grade II–III varicocele on the right side
- Mild reduction in testicular volume: Right testis – 9.9 mL, Left testis – 8.8 mL

An IIEF-5 (International Index of Erectile Function–5) score of 12 indicated mild to moderate erectile dysfunction.

Semen analysis dated 20/05/2022 showed:

- Low sperm count: 12 million/mL
- Poor motility:
 - ◇ Rapid progressive: 3%
 - ◇ Slow progressive: 7%
 - ◇ Non-progressive: 10%
 - ◇ Immotile: 80%
- Normal morphology: 17%

His blood parameters as on 03/10/2023 revealed normal levels of LFT, RFT, TFT, lipid profile and blood glucose levels (FBS, PPBS). Hormonal evaluation revealed testosterone, follicle-stimulating hormone (FSH), and luteinizing hormone (LH) levels to be within normal limits.

DIAGNOSTIC ASSESSMENT

Physical examination confirmed the presence of varicocele along with features suggestive of testicular atrophy. Scrotal Doppler ultrasonography revealed bilateral varicocele, corroborating clinical findings. Semen analysis results were consistent with oligoasthenozoospermia, reflecting both reduced sperm count and impaired motility.

THERAPEUTIC INTERVENTION

Table 1: Internal Medications and Dosage

<i>Guduchyadi Kashaya</i>	90ml bd before food
<i>Dooshivishari Gulika</i>	1 tablet bd after food with honey
<i>Avipathi churna</i>	5 gm with honey at bedtime

The patient was advised internal medications throughout the 2-month hospitalization period, except on the days when *Virechana*, *Snehapana*, and *Peyadi Krama* were administered.

FOLLOW-UP AND OUTCOME

Following two months of treatment, the patient reported significant clinical improvement, with a marked reduction in scrotal swelling and pain. Erectile function also improved considerably, as reflected by an International Index of Erectile Function-5 (IIEF-5) score of 22.

To objectively assess the treatment outcome, the patient was advised to undergo scrotal Doppler ultrasonography on 30/11/2023, two months after initiation of

Table 2: Shodhana Chikitsa

DATE	PROCEDURE	MEDICINES WITH DOSE	DURATION
10/10/23	Virechanam	Avipathi choornam 20gm (6am)	1 day
11/10/23		Rest	
12/10/23 – 18/10/23	Choorna Pinda Swedam	Vara choorna	7 days
19/10/23 – 25/10/23	Acha Snehapanam	Shatavaryadi Ghritham (25ml, 50ml, 100ml, 125ml, 150ml, 175ml, 200ml)	7 days
26/10/23	Abhyangam + Mild Ushmasweda	Dhanwantharam Thaila + Pinda Thailam	1 day
27/10/23	Virechanam	Avipathi choornam 20gm (6am)	1 day
28/10/23		Rest	
29/10/23 – 04/11/23	Sarvanga Dhara	Dhanwantharam Thailam + Pinda Thailam	7 days
05/11/23	Virechanam	Avipathi choornam 20gm (6am)	1 day
06/11/23		Rest	
07/11/23 – 14/11/23	Yoga Vasti	Sneha Vasti – Madhuyashtyadi Thailam (150ml) Kashaya Vasti – Honey – 100 ml Saindhava – 15 gm Madhuyashtyadi thaila – 100ml Satapushpa kalka – 15 gm Sahacharadi Kashaya – 400ml	8 days
15/11/23 – 21/11/23	Shastika Pinda Swedam	Dhanwantharam Thaila + Pinda Thaila	7 days
12/10/23, 19/10/23, 26/10/23, 02/11/23, 10/11/23, 17/11/23	Raktamokshana (from vrishana pradesha)	Jaloukavacharana	6 sittings, weekly once

treatment. The report revealed a significant reduction in scrotal swelling, with testicular volume approaching near-normal levels (Right - 12.6 cc; Left - 11.2 cc) and no evidence of right-sided varicocele.

Semen analysis also demonstrated marked improvement:

- Sperm count: 75 million/mL
- Motility: Rapid progressive - 50%, Slow progressive - 20%
- Normal morphology: 60%

The overall impression was consistent with Normozoospermia.

The patient was advised to continue the following medications for one month:

- *Guduchyadi Kashaya* - 90 mL twice daily before food
- *Shatavaryadi Ghritha* - 1 teaspoon at bedtime
- *Avipathi Choorna* - 1 teaspoon with honey at bedtime

Pathya and *apathya* (dietary and lifestyle guidelines) were explained. The patient was advised to follow a *Vatapitta shamaka* dietary and lifestyle regimen. Regular meals at fixed times were recommended, with emphasis on warm, freshly prepared, mildly spiced food. The diet included milk, ghee, rice, green gram, wheat preparations, cooked vegetables, pomegranate, dates, soaked almonds, and seasonal sweet fruits. Adequate hydration was advised.

The patient was instructed to avoid excessively spicy, sour, fried, and processed foods, including pickles, deep-fried meat preparations, refined flour products, and excessive tea or caffeinated beverages. Consumption of tomatoes, fermented foods, and very pungent items was restricted due to their *pitta* and *rakta* vitiating properties.

Regarding lifestyle (*vihara*), the patient was advised to maintain regular sleep-wake cycles, moderate physical activity, stress reduction, wear loose fitting cotton garments and avoidance of excessive heat exposure and prolonged sitting. Practices such as light exercise, walking, and mental relaxation techniques were encouraged to support overall reproductive health.

He advised to report for follow-up after one month.

DISCUSSION

Chronic intake of *rooksha* (dry), *vidahi* (irritant), *amla* (sour), and *katu* (pungent) *rasa-pradhana ahara*, along with smoking, contributes to the aggravation of *vata - pitta doshas*^[5]. Additionally, *chinta* (stress) is a known aggravating factor for *vata*, which, when vitiated, contributes to tortuosity of the pampiniform plexus, causing vascular congestion and stasis^[6].

The patient's excessive intake of non-vegetarian foods, including chicken, paneer, and tomatoes, contributed to *pitta dosha* aggravation, resulting in increased *ushnatwa* (localized

heat), which is understood to further impair spermatogenesis^[7]. The daily intake of the aforesaid *virudhahara* might have also contributed to *sopha*, *amavisha* and *shandya*^[8].

A strong family history of varicocele (with three affected siblings) suggests a genetic predisposition^[9]. Moreover, his previous smoking habit is a known factor associated with decreased sperm quality, reduced functional integrity, and elevated seminal oxidative stress^[10]. The cumulative toxins may act as *dooshivisha*, subtly vitiating *dhatu* over time^[11].

According to Acharya Susruta, in the pathogenesis of *siragranthi*, *vata* and *pitta* doshas are primarily vitiated. This vitiation further affects the *mamsa*, *rakta*, *medodhatus*, and the *siras*, leading to the formation of a spheroid, knotty, elevated swelling, referred to as a *granthi*.

The *samprapti* of this condition can be outlined as follows: *Aharaja*, *viharaja* and *manasika nidanas* like *amla katu bhojana*, excessive spicy and non - veg foods, *chinta* etc trigger *Vata - Pitta dushti*, which forms the primary pathological basis of the disease. In the present condition, a strong familial predisposition, attributable to *Beeja / Beeja-Bhaga-Avayava dushti*, acts as a significant contributory factor by creating an inherent structural and functional vulnerability for the disease manifestation.

The vitiated *vata*, by virtue of its *ruksha*, *laghu*, *chala*, and *khara* gunas, localizes in the *sira* (blood vessels) of the *vrishana*. In its *prakupita* state, *vata* causes *sampeedana* (compression), *samkochana* (constriction), and *vishoshana* (drying up) of the *sira*, leading to the formation of *siraja granthi*, which clinically manifests as Varicocele. This pathological process results in *sanga* within the *sukravaha srotas*, thereby hampering the normal movement, nourishment, and functional integrity of *sukra*.

Concurrently, *pittadushti*, through *Ashraya-Ashrayi Bhava*, leads to *raktadushti*, with increased *saratva* and *dravatva* of *pitta* further aggravating the vascular pathology. Associated *apanavayu vaigunya* results in *vishamagni* and subsequent formation of *ama*. *Ama* impairs the proper formation of *rasa dhatu*, leading to defective *dhatuposhana* of all the successive *dhatu*s.

As a result, *sukra dhatu* formation becomes quantitatively and qualitatively deficient, producing *ksheena sukra*. The combined influence of *beeja dushti* - induced susceptibility, persistent *sanga* in *sukravaha srotas*, *vata - pitta dushti*, and impaired *dhatu* nourishment culminates in *sukradhatu dushti*. Thus, *sukradhatu dushti* occurring secondary to *siraja granthi* manifests clinically as oligoasthenozoospermia with associated erectile dysfunction, representing a functional complication of the underlying vascular pathology.

Samprapti Ghataka

Dosha	- Vata Pitta
Dooshya	- Rasa, Rakta, Medas, Sukra
Agni	- Jataragni, Dhatwagni
Srotas	- Rasavaha, Raktavaha, Medovaha, Sukravaha
Sroto Dushti	- Siranam Granthi, Sangam
Vyakthi Sthana	- Vrishana

Sadhyasadyatha - Krichrasadhyam

By analyzing all the clinical features and investigations, the case was diagnosed as Bilateral Varicocele / *Siraja Granthi* in *Vrishana*.

In this case, a *vata-pittahara* treatment approach was adopted, including *shodhana* procedures such as *vastikarma* and *raktamokshana*. The associated *ksheenasukra*, attributed to *vata-pitta* imbalance, was managed using *sukrakara* (*Vajikarana*) *dravyas*, as per Ayurvedic guidelines.

In this case, *virechana*, *choornapinda sweda*, *snehana*, *sarvanga dhara*, *yogavasti* and *shastikapinda sweda* were administered as part of the treatment protocol. The line of treatment was aimed at *pittashamana*, *vatanulomana*, *srotoshodhana*, *raktaprasadana*, and *sukradhatuposhana*. This included *snehana*, *swedana*, *sodhana* (*virechana* and *vasti*), and *raktamokshana*. In addition to the procedural therapies, internal medications were also administered.

Guduchyadi Kashaya, *Dooshivishari Gulika* and *Avipatti Choorna*, were selected to address the underlying *dosha* imbalance, chronic *dooshivisha* exposure, and associated *dhatu* and *srotas* involvement. *Guduchyadi Kashaya*^[12] was prescribed primarily for its *pittashamana*, *raktaprasadana*, and *ama-pachana* actions. In the present case, features such as varicosity, scrotal tenderness, and burning sensation indicate *pitta* involvement at the level of *rakta* and *sira*. The formulation supports *yakrit* and *vrikka* functions, enhances systemic immunity, and helps mitigate oxidative stress, thereby contributing to improvement in varicocele-associated pathology and semen quality. *Dooshivishari Gulika*^[13] was included to address the chronic toxic load attributed to prior smoking, which can be conceptualized as *dooshivisha*. Its use was aimed at neutralizing latent toxins, protecting *dhatu*s, and preventing further oxidative damage. By counteracting long-standing toxic vitiation, it supports *sukradhatu poshana* and improves overall reproductive health. *Avipatti Choorna*^[14] was administered in a small dose of 5gm with honey, at bedtime to ensure effective *pitta* pacification. It also helps in *kosthasodhana* (cleasing of gastrointestinal tract), it aids in *vatanulomana* and prevents the recurrence of *pitta* aggravation, which is crucial in chronic conditions involving vascular congestion and *srotorodha*.

Initial *rookshana* was achieved through *choornapindasweda* using *varachoorna*, known for its *sophahara* and *pittashamaka* properties^[15]. Internal *snehapana*, as *Achasnehapana* was done with *Shatavaryadi Ghrita*, indicated in *raktasukra dushti* conditions, is having *vrishya* and *pumsavana* qualities^[16]. *Bahya abhyanga* and *sarvanga dhara* were performed with *Dhanwantharam Taila* ("Sarva vata vikarajit"-reliever of all *vata* vitiated conditions) and *Pinda Taila*, which is "vatarakta rujapaham" (analgesic action in *vatarakta* vitiated conditions)^[17].

Mild *ooshma sweda* was administered, considering the patient's *pitta prakriti* and *pitta*-dominant pathology. For *virechana*, *Avipatti choorna* was chosen, which is indicated in *pitta* predominant disorders such as *daha* (burning sensation), *trishna* (thirst), and *pitta rakta* vitiation^[18].

After *Virechana*, *Yogavasti* was administered. *Sneha Vasti* was done with *Madhuyashtyadi Taila*, indicated in conditions such as *vatarakta*, *pitta-vikaras*, *daha*, and *arti*

(pain)^[19]. *Kashaya vasti* was administered using *Sahacharadi Kashaya*, indicated in “*pavana peeditha dehagati*” (*vata* dominant pathologies of the lower body), commonly used in *siragranthi* and *adhogatavatavikaras*^[20].

Shastika shali pinda sveda, classified as *balyam* (rejuvenative), was employed to nourish tissues and reduce pain^[21].

Raktamokshana from *vrishana pradesha* (scrotal region) via *jalouskavacharana* was performed once a week for six weeks. It is classically indicated in *dooshita rakta vikara* (disorders arising due to vitiated *rakta*), where it helps relieve local inflammation, venous stasis, and ischemia.

Strict adherence to *pathyahara* and *vihara* (dietary and lifestyle regulations) was maintained throughout the treatment period. He was advised to avoid *divaswapna* (daytime sleeping), exposure to excessive heat and sunlight, overexertion through strenuous exercise, and excessive sexual activity. Dietary restrictions included avoidance of *katu* (pungent), *lavana* (saline), *amla* (sour), *ushna* (hot), *guru* (heavy), and *abhishyandi* (channel-obstructing) food items. Recommended dietary choices included cereals such as barley and wheat, meat soup, chickpeas, *mudga* (green gram), *masur dal*, green leafy vegetables, cucumber, coconut water, honey, ghee and milk, which help in *pitta- vata shamana*, *agni* enhancement, and *dhatu poshana*.

Following two months of treatment, the patient showed remarkable clinical improvement. The right-sided varicocele resolved completely, semen parameters normalized, and erectile function improved significantly, enhancing the patient's overall quality of life.

PATIENT PERSPECTIVE

“I had been struggling with infertility for more than 12 years, and it had affected me both mentally and emotionally. I had already undergone varicocelelectomy once, but my problems did not improve. When the scrotal swelling, pain, and heaviness started increasing again, I felt extremely worried. When I was told that I had Grade III–IV varicocele on the left side and varicocele on the right side as well, I felt hopeless and feared that I would never be able to father a child.

I decided to try Ayurvedic treatment as a last option. During the treatment, I started feeling relief from scrotal discomfort and heaviness. Gradually, I noticed better energy levels and improved sexual confidence. After two months, my semen parameters improved drastically, and my erectile function also became much better. The swelling on the right side disappeared, and the left-sided varicocele also reduced.

Ayurvedic treatment helped me not only physically but also emotionally, giving me confidence and positivity. I am grateful that I chose this treatment, as it has brought significant improvement in my quality of life.”

Conclusion

This case study highlights the effectiveness of Ayurvedic treatment in managing varicocele-associated oligoasthenozoospermia and erectile dysfunction, offering a safe and non-invasive alternative to surgical interventions. The treatment protocol led to significant improvements in scrotal varicosity, semen parameters, and

erectile function within a relatively short duration of two months.

These outcomes suggest that a holistic Ayurvedic approach targeting *dosha* imbalance, *dhatu* vitiation, and *srotorodha* can successfully address multiple facets of male reproductive dysfunction, thereby improving the overall quality of life. However, the persistence of left-sided varicocele necessitates continued observation and management. Furthermore, as infertility requires comprehensive evaluation of both partners, appropriate assessment and management of the female partner are equally important to optimize the likelihood of successful conception.

This case emphasizes the clinical potential of Ayurvedic interventions in the domain of male infertility and urogenital disorders, warranting larger studies to validate its broader applicability and establish evidence-based integrative protocols.

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