

## AYURVEDIC MANAGEMENT OF SERTOLI CELL-ONLY SYNDROME: INTERIM CASE STUDY HIGHLIGHTING IMPROVEMENTS IN OVERALL MALE REPRODUCTIVE HEALTH

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### ABSTRACT

Sertoli Cell-Only Syndrome (SCOS) is a form of non-obstructive azoospermia characterized by the absence of germ cells in the seminiferous tubules, leading to infertility in males. This condition is often associated with hormonal imbalances, impaired spermatogenesis and varicocele. Conventional management of SCOS includes hormonal therapy, surgical sperm retrieval techniques, and assisted reproductive technologies, which are often invasive and have limited success rates. This case study highlights the Ayurvedic management of a 36-year-old male diagnosed with SCOS and azoospermia, who presented with a history of secondary infertility for two years. The patient underwent treatment with Ayurvedic proprietary medicines- *Beehj*, *Shilajit*, *Sperm*

*Booster*, and *Vata Balancer* formulations. After six months of treatment, semen analysis showed a significant improvement in liquefaction time (from 40 minutes to normal), the presence of fructose (previously absent), and improvements in premature ejaculation and erectile dysfunction. Additionally, the patient experienced enhanced overall vitality, reduced stress levels, and improved hormonal balance. These findings suggest that Ayurveda offers a viable, non-invasive alternative for the management of SCOS, warranting further research to validate its broader applicability in male infertility treatment. This is an interim analysis, and a subsequent case study will be documented upon observation of further improvements.

**KEYWORDS:** Sertoli Cell-Only Syndrome, Azoospermia, Male Infertility, Ayurvedic Treatment, Beehj, Shilajit, Sperm Booster, Vata Balancer.

## INTRODUCTION

Sertoli Cell-Only Syndrome (SCOS), also known as Del Castillo Syndrome, is a rare and significant cause of male infertility characterized by the complete absence of germ cells within the seminiferous tubules of the testes. These tubules, which serve as the site for sperm production, contain only Sertoli cells, which provide structural and metabolic support but lack the ability to initiate spermatogenesis. As a result, men with SCOS experience non-obstructive azoospermia, meaning there is no sperm present in the ejaculate, leading to infertility. This condition is often associated with underlying genetic, hormonal, or environmental factors, and conventional treatment options remain limited in their ability to restore natural sperm production.<sup>[1]</sup> The etiology of SCOS remains unclear, though genetic factors, hormonal imbalances, testicular injury, infections, and environmental toxins have been implicated.<sup>[2]</sup>

Male infertility, including SCOS, is often underdiagnosed due to societal stigmas, limited awareness, and a historical emphasis on female reproductive health. Studies suggest that SCOS is a relatively common histological finding among men diagnosed with non-obstructive azoospermia.<sup>[3]</sup> Conventional treatment options such as hormonal therapy and assisted reproductive techniques offer limited success, particularly in severe cases.<sup>[1]</sup>

Ayurveda, an ancient system of medicine, addresses male infertility by focusing on strengthening Shukra dhatu (reproductive tissue) and promoting spermatogenesis through Rasayana (rejuvenative) therapies.<sup>[4]</sup> Ayurvedic formulations such as *Beehj*, *Shilajit*, *Sperm Booster*, and *Vata Balancer* are traditionally used to enhance testicular function, improve hormonal balance, and support sperm production. These medicines are known for their *Vrushya* (aphrodisiac), *Balya* (strength-promoting), and *Shukra vardhaka* (sperm-enhancing) properties.

This case study explores the efficacy of Ayurvedic interventions in a patient diagnosed with Sertoli Cell-Only Syndrome. After a structured regimen of *Beehj*, *Shilajit*, *Sperm Booster*, and *Vata Balancer*, the patient demonstrated marked improvements in semen parameters. This interim analysis documents the positive changes recorded thus far, indicating a promising response to the use of Ayurveda in treatment of male infertility disorders.

## CASE STUDY

### Patient Information

A 36-year-old male patient visited the clinic in August 2024 with a history of secondary infertility. He had been trying to conceive with his partner for the past few years without success. The patient reported symptoms of erectile dysfunction, premature ejaculation, and severe lower back pain.

He has a 12-year-old daughter from a previous conception, confirming prior fertility. However, after failing to conceive again over the past two years, he underwent testicular biopsies and semen analysis which revealed a diagnosis of Sertoli Cell-Only Syndrome and varicocele. He has also undergone an appendectomy in his early twenties but has no other significant illnesses.

### General Health

- Vitals.

**Table 1: Patient Vital Signs.**

Vitals	Values
Pulse	75/min
BP (Blood Pressure)	124/82
RR (Respiratory Rate)	18/min
SPO2 (Oxygen Saturation)	98%

**Table 2: Other Examinations.**

Parameter	Observation
Naadi Pariksha	Kapha-Pitta
Appetite	Normal
Bowel	Normal
Sleep	Disturbed due to severe lower back pain
Energy Levels	Normal

- Personal History

**Table 3: Personal History of Patient.**

Alcohol Consumption	Occasional
Smoking	No
Tobacco Chewing	Occasional
Junk Food	Occasional intake
Non-veg	Occasional intake
Stress	Primarily related to fertility concerns

**Table 4: Medical History of Patient.**

Condition/Investigations	Findings
Germ Cell Aplasia	Confirmed through biopsy
Varicocele	Diagnosed via scrotal Doppler ultrasound
Appendectomy	Surgery performed

**Table 5: Semen Analysis Reports.**

Parameter	Pre-Treatment
Sperm Count	Nil
Liquefaction Time	40 Minutes
Fructose	Absent
Sperm Motility	Nil
Sperm Morphology	Nil
pH	8.0

### Diagnosis

The patient was diagnosed with secondary infertility and Sertoli Cell-Only Syndrome (SCOS), with additional findings of varicocele, seminal plasma abnormalities, azoospermia and sexual dysfunction- erectile dysfunction and premature ejaculation.

### Ayurvedic Management

Following consultation, an Ayurvedic treatment approach was adopted to enhance reproductive function and seminal plasma quality. The patient was prescribed a combination of proprietary formulations targeting Shukra dhatu (reproductive tissue) nourishment, Vata balance, and testicular microcirculation improvement.

Medicine Given	Ingredients/Contents	Dosage
<b>Beehj</b>	<i>Shweta Musali, Shuddha Kaucha, Gokshur, Ashwagandha, Guduchi, Vriddhadaru, Shatavari, Bala, Amalaki, Varahi Kanda, Kokilaksha, Vidarikanda, Jivanti, Akkalguru, Jayphal, Swarnamakshik bhasma, Swarna Bang, Shuddha Shilajit, Salab Mishri Churna</i>	2 tablets, twice daily
<b>Shilajit</b>	<i>Purified Asphaltum</i>	Pea sized piece, once daily at night with warm milk
<b>Sperm Booster</b>	<i>Kaunchbeehj</i>	2 tablets, twice daily
<b>Vata Balancer</b>	<i>Haritaki</i>	2 tablets at night

### Lifestyle and Dietary Modifications

The patient was advised to:

- Follow a nutrient-rich diet including milk, nuts, seeds, and antioxidant-rich foods.
- Engage in regular physical activity (30minutes daily), including walking, yoga and pranayama.
- Manage stress through meditation and relaxation techniques.
- Avoid excessive heat exposure, caffeine, and processed foods, drinking and tobacco chewing

### Follow-Up and Outcome

After six months of treatment, significant improvements were observed

Parameter	Pre-Treatment	Post-Treatment
Fructose	Absent	Present
Liquefaction Time	40 min	Normal (Improved)
Erectile Dysfunction	Present	Nil
Premature Ejaculation	Present	Nil
Lower Back Pain	Persistent	Reduced significantly

After six months of Ayurvedic treatment, the patient exhibited notable clinical improvements across multiple parameters. Semen analysis showed the presence of fructose, which was previously absent, indicating enhanced seminal vesicle function. Liquefaction time, initially delayed at 40 minutes, normalized post-treatment. In terms of sexual health, the patient reported complete resolution of erectile dysfunction and premature ejaculation. Additionally, his persistent lower back pain, which had been a significant complaint, was significantly reduced, contributing to an overall improvement in quality of life and reproductive well-being.

### DISCUSSION

The Ayurvedic treatment used in this case addresses Sertoli Cell-Only Syndrome (SCOS) through a multifaceted approach, combining rejuvenating, adaptogenic, and hormone-balancing herbs that target the root causes of male infertility.

**Beehj**, a comprehensive formulation, contains a synergistic blend of *Shweta Musali*, *Shuddha Kaucha*, *Gokshur*, *Ashwagandha*, *Guduchi*, *Vridhdharu*, *Shatavari*, *Bala*, *Amalaki*, *Varahi Kanda*, *Kokilaksha*, *Vidarikanda*, *Jivanti*, *Akkalgaru*, *Jayphal*, along with *Swarnamakshik Bhasma*, *Swarna Bang*, *Shuddha Shilajit*, and *Salab Mishri Churna*. These herbs and minerals work together to enhance spermatogenesis, boost testosterone levels, and promote

Sertoli cell function. *Ashwagandha*, *Shuddha Kaucha*, and *Shweta Musali* are well known for their adaptogenic and aphrodisiac properties, helping to reduce stress-induced infertility while supporting hormonal equilibrium. *Guduchi*, *Vridhdharu*, and *Amalaki* add antioxidant value, helping to neutralize oxidative stress that may impair sperm quality. Minerals like *Swarnamakshik Bhasma* and *Swarna Bang* contribute to hormonal balance and tissue rejuvenation, while *Salab Mishri* supports vitality and reproductive vigor.<sup>[5][6]</sup>

**Shilajit**, plays a pivotal Rasayana role. It enhances mitochondrial efficiency and boosts the body's natural antioxidant defense, both crucial for healthy sperm motility. Its ability to enhance nitric oxide production also aids in improving erectile function and addressing premature ejaculation—key symptoms seen in SCOS-related sexual dysfunction.<sup>[7]</sup>

The **Sperm Booster**, containing *Kaunchbeej* (*Mucuna pruriens*), is a targeted spermatogenic agent known for its high L-DOPA content, which promotes dopamine activity and regulates gonadotropin-releasing hormone. This action supports the hypothalamic-pituitary-gonadal axis, enhancing sperm production, improving semen quality, and revitalizing libido.<sup>[8]</sup>

**Vata Balancer**, with *Haritaki* as its sole ingredient, works to pacify Vata dosha, which is often implicated in male reproductive and neurological disorders in Ayurvedic understanding. By regulating Vata, it improves neuromuscular coordination involved in ejaculation and reduces associated symptoms like lower back pain and restlessness.<sup>[5]</sup>

Biochemical changes observed post-treatment further affirm the effectiveness of the Ayurvedic protocol. The reappearance of fructose in the semen suggests an enhancement in seminal vesicle function, which is vital for sperm metabolism and reproductive performance. Additionally, normalization of liquefaction time reflects improved enzymatic activity in the semen and a healthier seminal plasma composition—both essential factors for fertility.

These biochemical and clinical outcomes were accompanied by marked improvements in the patient's reproductive health. He reported increased libido, improved erectile function, reduction in premature ejaculation, and significant relief from chronic lower back pain. Semen analysis further confirmed a reduction in liquefaction time from 40 minutes to the normal range, along with the presence of fructose in the ejaculate—clear indicators of improved seminal quality.

Also, the patient had fathered a biological child 13 years prior, suggesting that SCOS and associated azoospermia were acquired rather than congenital. This opens up the possibility for partial or even significant recovery of spermatogenic function with consistent and targeted intervention.

In conclusion, this case illustrates how a structured Ayurvedic regimen can contribute meaningfully to the management of non-obstructive male infertility, especially in SCOS. Improvements in semen liquefaction time, presence of fructose, and resolution of erectile dysfunction and premature ejaculation collectively highlight Ayurveda's potential in restoring systemic balance, rejuvenating reproductive tissues, and correcting underlying dosha imbalances in a holistic manner.

## CONCLUSION

This case highlights the effectiveness of Ayurvedic management in improving reproductive health outcomes in Sertoli Cell-Only Syndrome. The treatment protocol led to significant changes in semen parameters and resolution of associated symptoms such as erectile dysfunction, premature ejaculation, and lower back pain. The presence of fructose in the semen and improved liquefaction time reflect enhanced seminal plasma function and overall reproductive vitality. Ayurvedic treatment is ongoing, and azoospermia persists at this stage. However, the progress observed thus far provides a strong foundation for continued intervention. A follow-up case report will be presented upon further evaluation, particularly when any potential improvement in azoospermia is documented.

## CONFLICT OF INTEREST

None declared.

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