

Uttara Basti in the Management of *Ksheena Shukra* w.s.r. to Azoospermia - A Single Case Study

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ABSTRACT:

This case study explores the Ayurveda management of *Ksheena Shukra* (azoospermia) through *Uttara Basti*, a specialized treatment involving medicated enemas. A 39-year-old male patient with azoospermia, seeking primary infertility treatment, was treated at the Bandaranayake Memorial Ayurveda Research Institute. The treatment protocol included *Amapachana* (digestive stimulant), *Agni Deepana* (enhancing digestive fire), *Virechana Karma* (therapeutic purgation), *Yoga Basti* (medicated enema), and *Uttara Basti* using various medicated oils. The regimen aimed to detoxify the body, enhance metabolic functions, and nourish *Shukra Dhatu* (reproductive tissue). Post-treatment semen analysis showed significant improvement in semen quality, including sperm count, motility, and morphology, indicating the effectiveness of the Ayurveda approach in managing male infertility associated with Azoospermia. The study suggests that comprehensive Ayurveda treatments focusing on detoxification and targeted tissue nourishment can offer promising results for Azoospermia. Further research with larger sample sizes is recommended to establish standardized guidelines.

KEYWORDS: Ayurveda, Azoospermia, *Ksheena Shukra*, *Uttara Basti*.

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INTRODUCTION:

Male infertility is defined as the inability to achieve conception within one year of unprotected intercourse. Studies indicate that male factors alone account for approximately 20–30% of infertility cases, while around 50% of couples experience infertility due to male factors. ^[1] Diseases associated with male infertility primarily include obesity ^[2], hypogonadotropic hypogonadism, reproductive system infections ^[3], and some systemic diseases ^[4]. Unhealthy lifestyles, such as smoking ^[5] and alcohol consumption ^[6], as well as environmental factors, also have harmful effects on male reproductive function and leads to disrupt fertility through various mechanisms ^[7]. *Shukra* is the terminal tissue element of the body which is considered as the *sara* of all other *Dhatu*s. The specific function of *Shukra dhatu* is *Garbha utpadana* ^[8]. The *karma* or actions of *Shukra dhatu* are *Dhairya*, *Chyavana*, *Priti*, *Dehabala*, *Harsba*, and ultimately it helps in the production of healthy progeny (*Garbha utpadana*) ^[9].

Both Acharya Charaka and Acharya Sushruta explained the *Shukra vaha srotas*, its *moolasthan*, and its *karma* ^[10, 11]. Acharya Sushruta has mentioned the following *Shukradoshas* - *Vata*, *Pitta*, *Kapha*, *Sbonit*, *Kunap*, *Granthi*, *Puti*, *Puya*, *Ksheena*, *Mutra*, *Purish*, *Retas* ^[12].

When the *Shukra Dhatu* is affected by imbalances (*Dosha*, *Datbu*, *Mala*), it leads to conditions that impact sperm quality, quantity, motility, and morphology. Other *Shukra* disorders like *Shukrakshaya* (deficiency or low sperm count), *Shukradhushti* (impure or abnormal semen), and *Shukraghata Vata* (obstruction in semen flow) are described, which resemble modern sperm abnormalities like Oligospermia, Asthenozoospermia, and Teratozoospermia.

CASE REPORT:

A 39-year-old married male patient, a printer by occupation, consulted at *Streeroga prasutitantra* clinic of Bandaranayaka Memorial Ayurveda Research Institute in August 2023. He visited with his wife and was trying to get pregnant, but was unable to conceive with unprotected regular intercourse for more than three years. The patient has no past medical history of mumps, orchitis, sexually transmitted diseases, or genitourinary tract infections previously. All secondary sexual characters are visible. There is no evidence of exposure to chemicals, heat, or radiation. There is no history of tobacco, betel, or alcohol consumption reported. There has been stress in the workplace for a few years due to his job.

Examinations: There is no history of erectile dysfunction, premature ejaculation, or delayed ejaculation, previous surgeries involving inguinal or scrotal areas. On local examination, no anatomical abnormalities could be found. There are no signs of inflammation, rashes, or ulcerations, accumulation of fluid, blood, and descent bowels in the scrotum, testes, or penis. According to his *Darshana* and *Prashna* examinations, *Ashtavidhapareeksha* and *Dashavidhapareeksha* were normal. General examination findings are mentioned in Table 1.

Investigations: Several routine examinations were done, and the results are mentioned in Table 2. Other related investigations are presented in Table 3.

Diagnosis: According to the semen analysis report, it was diagnosed as *Ksheena Shukra* (Azoospermia) Table -6.

Treatment Protocol:

The treatment protocol was based on the principles of *Amapachana* (digestive stimulant) and *Agni Deepana* (enhancing digestive fire), followed by *Virechana Karma* (therapeutic purgation) and *Yoga Basti* (medicated enema) to achieve comprehensive *Shodhana Karma*

(detoxification and purification). Upon completion of the *Shodhana Karma*, *Uttara Basti* (specific medicated enema) was administered (Figure 1, 2), with a focus on promoting the proper formation and nourishment of *Shukra Dhatu* (reproductive tissue). The detailed treatment protocol and timeline are outlined in Table 4, 5.

Table-1: General Examination findings

Pulse:	74/min
BP:	120/85 mmHg
RR:	16/min
Weight:	55 kg
Height:	156 cm
BMI:	22.6 kg/m ²
<i>Mala:</i>	<i>Badda</i>
<i>Mutra:</i>	Day/Night: 5-6/1
<i>Jihva:</i>	<i>Ama+</i>
<i>Nidra:</i>	Sound
<i>Agni:</i>	<i>Mandagni</i>
<i>Prakriti:</i>	<i>Pita Vata</i>

Table-2: Investigation findings:

Serum creatinine:	1.03 mg/dL
VDRL:	Negative
Fasting blood sugar:	70.8 mg/dL
AST:	68 U/L
ALT:	111 U/L

Table-3: Special Investigation findings:

Testosterone	2.09 ng/ml
LH	4.85 mIU/ml
Prolactin	8.98 ng/ml
FSH	12.94 mIU/ml
Free Thyroxin	1.47 ng/dl
TSH	1.10 mIU/ml

Table-4: Timeline of medications:

Treatment protocol	Duration
<i>Ama Pachana, Agni Deepana</i>	14 Days
<i>Achcha pana, Virechna karma, Samsarjana karma</i>	14 Days
<i>Madhu tailika basti</i> followed by <i>Uttara basti</i>	03 Days

Table-5: Uttara Basti schedule

	Drug used for <i>Uttara basti</i>	Dose	Route of administered
Day 1	<i>Thriphala</i> oil	20 ml	Urethra
Day 2	<i>Ksheera bala</i> oil	20 ml	Urethra
Day 3	<i>Ashvagandha</i> oil	20 ml	Urethra

Table-6: Results showing by Semen Fluid Analysis

Characteristic	Before Treatment on 28/12/2022	After Treatment on 15/09/2023
Appearance	Opaque	Cream Opaque
Liquefaction	60 min	25 min
Consistency	Increased	Increased
Volume	3.5ml	1 ml
PH	9.0	7.7
Total sperm count	0	0.1 millions/ml
Rapid Progressive motility	0	05%
Slow motility	0	10%
Non progressive motile	0	15%
Immotile	100%	70%
Normal morphology	–	95%
Pus cells	1-2/hpf	6-8/hpf
Red cells	2-4/hpf	1-2/hpf
Organisms	+	+



Figure-1: Inserting Foley catheter

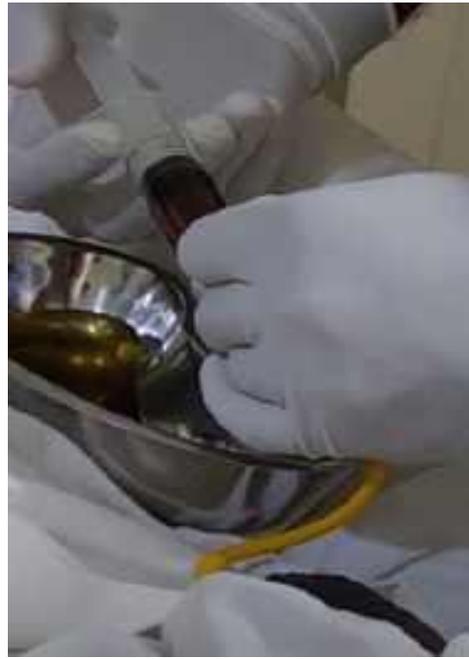


Figure-2: After inserting the catheter, Insert 20ml of oil into the bladder

DISCUSSION:

The treatment protocol followed for this case aimed at addressing the underlying issues related to the impaired formation and function of *Shukra Dhatu*. The approach was systematic, beginning with *Amapachana* (digestive stimulant) and *Agni Deepana* (enhancing digestive fire), which are essential steps in preparing the body for detoxification. These procedures help in eliminating toxins and enhancing metabolic functions, creating a conducive environment for subsequent therapeutic measures.

In modern treatments aim to restore or enhance these hormonal pathways, leading to the initiation of spermatogenesis in cases where the testicular tissue is still viable. Spermatogenesis, the process by which sperm is produced, begins in the seminiferous tubules of the testes. This process is governed by a complex hormonal feedback system, primarily involving the hypothalamus, pituitary gland, and testes.

The hypothalamus releases GnRH (gonadotropin-releasing hormone), which signals the pituitary gland to release FSH and LH (luteinizing hormone). FSH directly stimulates spermatogenesis, while LH triggers testosterone production from the Leydig cells in the testes.

Following this preparatory phase, *Virechana Karma* (therapeutic purgation) was administered to facilitate *Shodhana* (detoxification). *Yoga Basti* (medicated enema) was then employed to further purify the body and balance the *Doshas* (bodily humors). This combination of *Virechana* and *Yoga Basti* helped achieve a comprehensive detoxification, which is believed to enhance the body's receptivity to further treatments, such as *Uttara Basti*. *Uttara Basti* (a specific type of medicated enema administered through the urethra) was then administered with a focus on nourishing and promoting the formation of *Shukra Dhatu*. The treatment involved the

use of different medicated oils, such as *Thriphala oil*, *Ksheera Bala oil*, and *Ashvagandha oil*, each on successive days. These medicated oils were selected for their specific properties to enhance tissue nourishment and support reproductive health.

The semen analysis conducted before and after the treatment showed a significant improvement. The total sperm count, which was initially zero, increased to 0.1 million/ml post-treatment. Additionally, the motility of sperm improved, with 5% showing rapid progressive motility and 10% showing slow motility. There was also an increase in normal sperm morphology to 95%. These results indicate a marked improvement in semen quality and suggest the effectiveness of the treatment protocol in managing *Ksheena Shukra* associated with azoospermia.

CONCLUSION:

The comprehensive Ayurveda treatment protocol based on *Shodhana Karma* followed by *Uttara Basti* demonstrates promising results in the management of *Ksheena Shukra* corresponding to azoospermia. The protocol's focus on detoxification, metabolic enhancement, and targeted nourishment of *Shukra Dhatu* has shown effectiveness in improving semen parameters, including sperm count, motility, and morphology. This case supports the potential role of Ayurveda in addressing male infertility issues, particularly in cases where conventional medical treatments may have limited success. Further studies with larger sample sizes are recommended to validate these findings and establish standardized treatment guidelines.

Limitation of study:

As this is single case report so more cases need to be tried as treatment protocol for its scientific validation and Ayurveda treatments are highly individualized, depending on a patient's constitution (*Prakriti*) and other factors, which makes it hard to standardize treatments across different populations. Therefore this limitation highlights the need for more integrative and research-backed approaches to azoospermia treatment.

Declaration of patient consent:

The authors certify that they have obtained all appropriate patient consent for using clinical information reporting in the journal. The patient understand that his name and initial will not be published and due effort will be made to conceal the identity.

Conflict of interest: The author declares that there is no conflict of interest.

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