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Integrative Yoga and Ayurvedic Approach to Male Infertility (Shukrashaya): A Case Study

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ABSTRACT:
Infertility, characterized as the failure to conceive after at least 12 months of consistent, unprotected sexual activity, impacts approximately 8–12% of couples globally. Male infertility represents a major health issue worldwide, with oligo-asthenozoospermia being among the most common clinical presentations. Male-related factors account for nearly half of all infertility cases, with oligo-asthenozoospermia - a condition characterized by reduced sperm count and motility - being a common diagnosis. While conventional treatments exist, they often have limitations, including cost, side effects, and lack of personalized care. Ayurveda and Yoga offer holistic, non-invasive alternatives targeting the root causes of male infertility. This case study highlights the clinical efficacy of an integrative regimen incorporating Ayurvedic treatments and Yogic practices for Shukrashaya (oligo-asthenozoospermia), rooted in traditional Ayurvedic concepts and substantiated through modern semen analysis. Post treatment Result of semen analysis showed a rise in sperm count from 90 million/ml to 106 million/ml and an improvement in total motility from 70% to 86%, with progressive motility increasing from 40% to 50%. The integrative approach demonstrated effectiveness in balancing Vata and Pitta doshas, enhancing Shukra Dhatu, and reducing stress through HPG axis modulation.

1. INTRODUCTION

Infertility is defined as the incapacity to fulfil pregnancy after a reasonable time of sexual intercourse with no contraceptive measures taken. The definition of a "reasonable time" to achieve conception remains subject to debate. Both the World Health Organization (WHO, 1992a) and the European Society of Human Reproduction and Embryology (ESHRE, 1996) recommend a minimum period of two years before defining infertility. However, in clinical practice, most healthcare providers begin evaluating a couple for infertility after one year of unsuccessful attempts to conceive.

Hence, Infertility is clinically defined as the failure to achieve pregnancy despite engaging in regular, unprotected sexual intercourse for a period of 12 months or longer [1]. Worldwide, infertility impacts an estimated 8–12% of couples, with male-related factors accounting for approximately 50% of all cases [2]. Male infertility arises from a complex interplay of factors, including genetic defects, endocrine dysfunctions, urogenital infections, varicocele, elevated oxidative stress, adverse lifestyle practices, and exposure to environmental toxins [3,4]. One of the prevalent diagnoses of semen abnormalities is oligoasthenozoospermia, characterized by low sperm count and poor motility, significantly impairing male reproductive potential [5].

Oligospermia is defined by the World Health Organization (WHO) as a sperm concentration of fewer than 15 million sperm per milliliter of semen, corresponding to the 5th percentile threshold observed in fertile males. Oligospermia can be classified as [6].

1. Mild: concentrations 10 million - 15 million sperm/mL
2. Moderate: concentrations 5 million - 10 million sperm/mL
3. Severe: concentrations less than 5 million sperm/mL

In Ayurvedic medicine, male infertility is encompassed within the concept of Shukradushti, with Ksheena Shukra being a key clinical condition analogous to oligospermia and asthenozoospermia. This condition is primarily linked to the imbalance of Vata and Pitta doshas, leading to both quantitative and qualitative impairments in Shukra Dhatu. [6,7]. The classical texts state Shodhana (bio-purification) followed by Shamana (palliative) therapy and Vajikarana (aphrodisiac) formulations aimed to restore Shukra quality and promote fertility [8].

Chronic psychological stress is a recognized etiological factor in male infertility, primarily exerting its effects through disruption of the hypothalamic-pituitary-gonadal (HPG) axis, leading to altered hormonal regulation and impaired spermatogenesis [9]. Yogic practices, as part of a mind-body integrative approach, have been shown to reduce stress levels, modulate endocrine function, and enhance semen quality [10]. Therefore, the integration of Ayurvedic interventions with Yoga offers a comprehensive, individualized, and non-invasive therapeutic strategy for the management of male infertility.

This case study highlights the efficacy demonstrates the effectiveness of a comprehensive integrative approach that combines Ayurvedic treatment with Yogic interventions in enhancing semen parameters and addressing the root causes in a male patient diagnosed with Shukrashaya (oligo-asthenozoospermia).

1.1 AIM AND OBJECTIVE

To assess the efficacy of Yoga and Ayurvedic approach in the management of Male infertility (Shukrashaya)

2. MATERIAL AND METHOD

2.1 Case History- A 31-year-old male resident of Pune district, Maharashtra, Agriculture by occupation, moderately build, married for 3 years, was apparently healthy before 2024, then he started complaining of failure to conceive even after active married life and his 25-year-old wife had regular menstruation cycles. The female partner had no notable past or family history of reproductive tract disorders, pelvic infections, or previous surgical interventions. Despite regular unprotected intercourse, the couple faced difficulty in conceiving. Upon consulting a gynecologist and undergoing routine evaluation, the female partner's reports were within normal limits. However, the male partner was diagnosed with oligozoospermia during the fertility assessment.

2.1.1 Past history: N/K/C/O DM/ HTN / Thyroid dysfunction.

2.1.2 Personal history

Diet - Mixed diet, twice daily, irregular interval of food, craving for Atitikta (spicy foods), Atilavana Ahara (excessive salt).

Appetite – Good

Addiction: No any addiction

2.1.3 Family history: Not Significant

2.2 Clinical Examination-

The patient's clinical evaluation was conducted using Ashtavidha and Dashavidha Pariksha (eightfold and tenfold Ayurvedic diagnostic methods). Physical examination of the male genitalia revealed no anatomical abnormalities. There were no signs of inflammation, ulceration, or dermatological lesions on the penis or testes. The scrotal temperature was within normal physiological limits, and both the position and size of the testes were found to be normal.

Table 1 Ashatavidha Pariksha

Nadi (Pulse)	80/min
Mala (Stool)	Asamyak (Unsatisfactory bowel habit)
Mutra (Urine)	Samyak
Jivha (Tongue)	Saam
Shabda (Speech)	Spashta
Drika (Eyes)	Prakruta
Sparsha (Skin)	Anushnasheeta
Akriti (Posture)	Madhyama

Table 2 – Dashvisha Pariksha	
Prakriti (Constitution)	VataKaphaja

Vikriti (Imbalance)	VataPittaja
Sara (Tissue Excellence)	Madhyam
Samhanana (Body Build)	Moderate
Pramana (Body Proportions)	Within normal limit
Satmya (Adaptability)	Moderate
Satva (Psychological Strength)	Madhyam
Ahara Shakti (Digestive Strength)	Madhyama
Vyayama Shakti (Exercise capicity)	Moderate
Vaya (Age)	Madhyam

Nidan Panchak

- **Hetu** (Etiology or Causative factors)**:** Dietary products include Bakery products, poha, intake of excessive salty and spicy foods, daily intake of junk and stale foods, irregular timing of food intake, Ratri jagaran, Stress.
- **Purvarupa** (Prodromal symptoms): Generalized weakness, Unsatisfactory bowel habit
- **Rupa** (Manifestation): Failure to conceive, Generalized weakness.
- **Upashaya** (Relieving factors): Pathya Ahara Consumption.
- **Samprapti** (Patho-physiology of the disease): Excessive intake of spicy and salty foods leads to Shukra Upashoshana and generalized weakness leads to Agnidushti further leading to Rasa Dhatu Dushti. This will simultaneously lead to hamper in uttarottar dhatu poshan. Ratrijagaran and Stress vitiate Vata and Pitta Dosha, hampering of dhatu poshan and strotasdushti results in KsheenaShukra Vikara w.s.r. to Asthenozoospermia.

Samprapti Ghatak

Dosha – Tridosh with Vata (Apana, Vyana), Pitta (Pachaka, Ranjaka) pradhanya
Dushya – Rasa, Majja, Shukra Pradhan
Agni – Dhatwagnijanya Ama
Srotas – Rasavaha, Shukravaha, Manovaha
Sroto Dushti – Sanga
Rogamarga – Abhyantara
Udbhavasthana – Aamshaya and Pakwashaya
Vyakta sthana – Apan kshetra (Vrushan and Medra)
Sanchara Sthana – Sarvasharira
Vyadhiswabhava – Chirakari
Rogamarga – Abhyantara
Sadhyasadhyatva – Krichhrasadhya

2.3 Investigation

Pre and Post treatment Seman analysis was done.

2.4 Treatment Advised

Based on the assessment of the disease pathophysiology in this case, a comprehensive treatment protocol was implemented, categorized into three therapeutic modalities: Shodhana (bio-purification), Shamana (palliative therapy), Vajikarana Chikitsa (rejuvenative and fertility-enhancing therapy), and Yogic practices, as detailed in the respective tables. The patient was also counseled to adopt specific lifestyle modifications, which included adherence to Pathya-Apathya (dietary guidelines), regular practice of Yoga, and observance of Brahmacharya (abstinence from masturbation and sexual activity) throughout the treatment period. Nutritional recommendations included the consumption of cow's milk, meat soup, coconut, cow ghee and black gram—foods traditionally recognized in Ayurveda for their Shukra-vardhaka (spermatogenic) and Rasayana (rejuvenative) properties.

Table 3 - Shodhan Chikitsa

S.No	Type of Chikitsa	Drugs	Duration
1	Deepana- Pachana	Amapachaka Vati 250mg 2 BD Before food	3 days
2	Sarvang Snehan	Bala Ashvagandhadi Taila	7 days

3	Sarvang Swedan	Nadi Sweda	7 days
4	Anuvasana Basti	Bala Ashvagandhadi Taila	Alternate day
5	Niruha Basti	Erandmuladi Basti	

Table 4 - Shamana Chikitsa

S.No	Drugs	Dose	Time of Administration	Anupana	Duration
1	Rasapachak (Bramhachaitanya)	2-tab TDS	After food	Luke warm water	2 months
2	Shukravallabh Rasa (Unjha pharmacy)	1-tab BD	After food	Luke warm water	2 months
3	Narikelasav	3-tsf BD	After food	Luke warm water	2 months
4	Shilapravang vati (Dhootpapeshwar)	1-tab OD	After food	Luke warm water	2 months
5	shurkamatruka vati (Baidyanath)	1-tab TDS	After food	Luke warm water	2 months
6	Kokilaksham Kashayam (Kottakkal)	1-tab Tds	After food	Luke warm water	2 months

Table 5 - Vajikaran Chikitsa

S.No	Drugs	Dose	Time of Administration	Anupana	Duration
1	Suvarna Malini Vasant	1-tab HS	After food	Luke warm water	1 months
2	Shilajit Gold	1-tab OD	After food	Luke warm water	1 months
3	Vrushya vati	1-tabTDS	After food	Luke warm water	1 months
4	Madanmodakam Leham	1-tsf BD	Before food	½ Glass Milk	1 months
5	Kaunch Pak	½-tab BD			
6	Musli Pak (Baidyanath)	½-tab BD			

Table 6 – Yoga Practices

S.No	Yogic practices	Duration
1	Suryanamaskar	5 min
2	Meditation	5 min
3	Kapalbhati	5 min
4	Bhastrika	5 min
5	Padmasan	5 min
6	Sarvagasan	5 min
7	Tadasan	5 min
8	Tratak	5 min

3. RESULTS

Following the completion of a three-month Ayurvedic treatment regimen, encompassing both Shodhana and Shamana Chikitsa, the patient underwent comparative semen analysis. Post-treatment evaluation revealed an increase in total sperm count to 106 million/ml, along with an improvement in sperm motility. The investigative findings recorded before and after the intervention are summarized in Table 6 and visually represented in Figure 1.

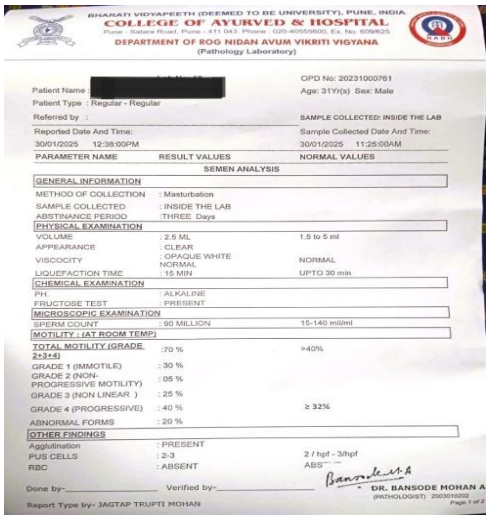
Table 7 – Assessment of semen Analysis

S.No	Assessment Parameter	Before treatment	After treatment
1	Volume	2.5 ml	2.5 ml
2	Color	Opaque white	Opaque white
3	Reaction	Alkaline	Alkaline
4	Liquifaction time	15 min	15 min
5	Total spearm count	90 million	106 million
6	Total Motility	70%	86%

7	Progressive motility	40%	50%
8	Non motile	30%	30%

Figure 1 – Semen Analysis report

Before treatment


BHARATI VIDYAPEETH (DEEMED TO BE UNIVERSITY), PUNE, INDIA
COLLEGE OF AYURVED & HOSPITAL
DEPARTMENT OF ROG NIDAN AVUM VIKRITI VIGYANA
(Pathology Laboratory)

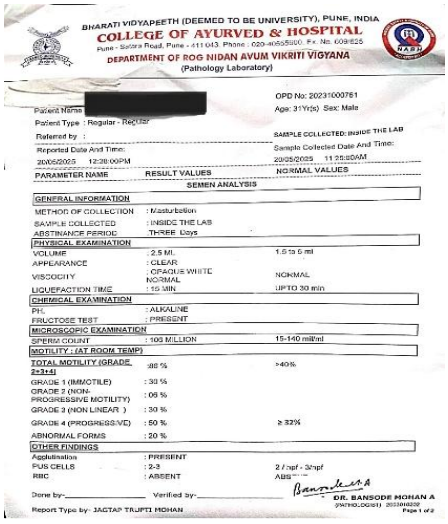
Patient Name [redacted] OPD No: 20231000761
Patient Type : Regular - Regular Age: 31Yr(s) Sex: Male
Referred by : SAMPLE COLLECTED: INSIDE THE LAB
Reported Date And Time: 30/01/2025 12:38:00PM Sample Collected Date And Time: 30/01/2025 11:25:00AM

SEMEN ANALYSIS

PARAMETER NAME	RESULT VALUES	NORMAL VALUES
GENERAL INFORMATION		
METHOD OF COLLECTION	: Masturbation	
SAMPLE COLLECTED	: INSIDE THE LAB	
ABSTINANCE PERIOD	:THREE Days	
PHYSICAL EXAMINATION		
VOLUME	: 2.5 ML	1.5 to 5 ml
APPEARANCE	: CLEAR	
VISCOCITY	: OPAQUE WHITE NORMAL	NORMAL
LIQUEFACTION TIME	: 15 MIN	UPTO 30 min
CHEMICAL EXAMINATION		
PH.	: ALKALINE	
FRUCTOSE TEST	: PRESENT	
MICROSCOPIC EXAMINATION		
SPERM COUNT	: 90 MILLION	15-140 mil/ml
MOTILITY : (AT ROOM TEMP)		
TOTAL MOTILITY (GRADE 2+3+4)	:70 %	>40%
GRADE 1 (IMMOTILE)	: 30 %	
GRADE 2 (NON-PROGRESSIVE MOTILITY)	: 05 %	
GRADE 3 (NON LINEAR)	: 25 %	
GRADE 4 (PROGRESSIVE)	: 40 %	≥ 32%
ABNORMAL FORMS	: 20 %	
OTHER FINDINGS		
Agglutination	: PRESENT	
PUS CELLS	: 2-3	2 / hpf - 3/hpf
RBC	: ABSENT	ABS

Done by:_____ Verified by:_____ DR. BANSODE MOHAN A (PATHOLOGIST)
Report Type by:- JAGTAP TRUPTI MOHAN Page 1 of 2

After treatment


BHARATI VIDYAPEETH (DEEMED TO BE UNIVERSITY), PUNE, INDIA
COLLEGE OF AYURVED & HOSPITAL
DEPARTMENT OF ROG NIDAN AVUM VIKRITI VIGYANA
(Pathology Laboratory)

Patient Name [redacted] OPD No: 20231000761
Patient Type : Regular - Regular Age: 31Yr(s) Sex: Male
Referred by : SAMPLE COLLECTED: INSIDE THE LAB
Reported Date And Time: 20/05/2025 12:28:00PM Sample Collected Date And Time: 20/05/2025 11:25:00AM

SEMEN ANALYSIS

PARAMETER NAME	RESULT VALUES	NORMAL VALUES
GENERAL INFORMATION		
METHOD OF COLLECTION	: Masturbation	
SAMPLE COLLECTED	: INSIDE THE LAB	
ABSTINANCE PERIOD	: THREE Days	
PHYSICAL EXAMINATION		
VOLUME	: 2.5 ML	1.5 to 5 ml
APPEARANCE	: CLEAR	
VISCOCITY	: OPAQUE WHITE NORMAL	NORMAL
LIQUEFACTION TIME	: 15 MIN	UPTO 30 min
CHEMICAL EXAMINATION		
PH.	: ALKALINE	
FRUCTOSE TEST	: PRESENT	
MICROSCOPIC EXAMINATION		
SPERM COUNT	: 106 MILLION	15-140 mil/ml
MOTILITY : (AT ROOM TEMP)		
TOTAL MOTILITY (GRADE 2+3+4)	:86 %	>40%
GRADE 1 (IMMOTILE)	: 30 %	
GRADE 2 (NON-PROGRESSIVE MOTILITY)	: 06 %	
GRADE 2 (NON LINEAR)	: 30 %	
GRADE 4 (PROGRESSIVE)	: 50 %	≥ 32%
ABNORMAL FORMS	: 20 %	
OTHER FINDINGS		
Agglutination	: PRESENT	
PUS CELLS	: 2-3	2 / hpf - 3/hpf
RBC	: ABSENT	ABS

Done by:_____ Verified by:_____ DR. BANSODE MOHAN A (PATHOLOGIST)
Report Type by:- JAGTAP TRUPTI MOHAN Page 1 of 2

4. DISCUSSION

Male infertility is a significant global health concern, with oligo-asthenozoospermia being one of the most prevalent clinical manifestations. This case study highlights the clinical efficacy of an integrative regimen incorporating Ayurvedic treatments and Yogic practices for Shukrashaya (oligo-asthenozoospermia), rooted in traditional Ayurvedic concepts and substantiated through modern semen analysis.

4.1 Clinical and Ayurvedic Perspective

In Ayurveda, Shukradushti is primarily attributed to vitiation of Vata and Pitta doshas and dysfunction of Rasa, Majja, and Shukra dhatus. Aggravating factors such as irregular diet, processed foods, stress, and sleep disturbances are believed to impair Agni (digestive fire), leading to Ama (toxins) accumulation and dhatu malnourishment, ultimately compromising Shukra Dhatu. This aligns with the classical Samprapti (pathogenesis) of reproductive tissue dysfunction.

A comprehensive therapeutic approach was adopted, consisting of Shodhana (purificatory therapies), Shamana (palliative measures), and Vajikarana (rejuvenative/aphrodisiac interventions). Deepana-Pachana with Amapachaka Vati was first administered to restore Agni and remove Ama, a prerequisite before Rasayana or Vajikarana therapy [11]. This was followed by Snehana (internal oleation) and Swedana (sudation) to mobilize doshas, preparing the patient for Basti (medicated enema) therapy targeting Apana Vata. Basti formulations such as Erandamuladi and Bala Ashwagandhadi Taila are documented to pacify Vata and promote Shukra Dhatu nourishment [12].

4.2 Shamana and Vajikarana Chikitsa

The sequential use of classical herbo-mineral formulations demonstrated therapeutic efficacy in enhancing seminal parameters. Formulations like Shukravallabh Rasa, Shilapravang Vati, and Suvarna Malini Vasant are indicated in classical texts for their Rasayana and Medhya properties, promoting Shukra quality and dhatu regeneration. Supplements such as Shilajit Gold, Kaunch Pak, Musli Pak, and Madanmodakam Leham have well-documented adaptogenic, anabolic, and antioxidant properties [13,14], supporting their role in improving sperm count and motility.

Post-treatment analysis revealed an increase in sperm count from 90 million/ml to 106 million/ml and motility from 70% to 86%, with progressive motility improving from 40% to 50%. These findings reflect effective Shukra Dhatu revitalization and Vata dosha regulation, with notable improvements in both quantitative and qualitative semen parameters—critical indicators of male fertility.

4.3 Role of Yoga

Yoga was integrated as an adjunctive intervention to address psychophysiological stress, a recognized disruptor of the hypothalamic-pituitary-gonadal (HPG) axis [15]. Yogic practices such as Surya Namaskar, Kapalbhati, Bhastrika, and meditation are reported to reduce cortisol levels and improve parasympathetic activity, thereby enhancing gonadotropin and testosterone secretion [16,17]. Specific asanas like

Sarvangasana and Padmasana potentially improve pelvic circulation and endocrine balance, supporting spermatogenesis.

4.4 Scientific Relevance

Modern literature links oligoasthenozoospermia to oxidative stress, hormonal imbalance, and mitochondrial dysfunction. Herbs like Ashwagandha, Shatavari, Kapikacchu, Musli, and Shilajit used in this case are known to exert antioxidant, adaptogenic, and androgenic effects [13,14], which likely contributed to the restoration of sperm function. While conventional therapies such as ART or hormone treatments remain mainstream, they often carry risks, high costs, and limited accessibility. In contrast, this integrative Ayurvedic-Yogic protocol offers a safe, cost-effective, and holistic alternative, especially in idiopathic or moderate cases.

4.5 Limitations and Future Scope

As a single case study, the results are not generalizable. Larger controlled trials with hormonal profiling, oxidative stress markers, and pregnancy outcomes are needed to validate these findings.

5. CONCLUSION

This case study highlights the potential effectiveness of a personalized integrative approach combining Ayurveda and Yoga in enhancing semen quality and overall reproductive health. The results align with the Ayurvedic concept that true treatment lies in disease elimination, achieved here through balancing doshas, nourishing bodily tissues, and reducing stress. Further clinical research may help establish standardized integrative protocols for managing male infertility.

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