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Case Report

A Case Study on the Effect of Ayurvedic Intervention in Oligospermia (*Shukra Kshaya*)

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Abstract

Oligospermia, defined as sperm concentration less than 15 million per millilitre, affects approximately 8-12% of males of reproductive age and represents a common cause of male infertility. The aetiology involves biological, lifestyle, and environmental factors affecting spermatogenesis. In Ayurvedic medicine, this condition correlates with *Shukra Kshaya*, characterised by depletion of *Shukra Dhatu* (reproductive tissue) due to *Vata-Pitta* vitiation and diminished *Agni* (digestive fire). This case report presents a 32-year-old male patient with primary infertility after two years of unprotected intercourse. Initial semen analysis (WHO 6th edition) revealed: sperm concentration 9.7 million/ml, total motility 64%, progressive motility 28%, and normal morphology 4%. Ayurvedic examination identified *Vata-Pitta Prakriti* with low *Agni* and *Shukra Dushti*. A six-month treatment protocol incorporating *Shodhana* (detoxification) therapy, *Deepana-Pachana* (digestive enhancement) using *Avipattikar Churna* and *Agnitundi Vati*, followed by *Shukravardhana* (semen enhancement) using *Ashwagandha, Kapikacchu*, and *Gokshura Churnas* with *Bala Tail Matra Basti* (60 ml daily), dietary modifications emphasising milk, ghee, nuts, and lifestyle changes including yoga and stress reduction resulted in significant improvements: sperm concentration increased to 17.7 million/ml, total motility to 73%, progressive motility to 49%, and normal forms to 8%. The patient reported complete evolution of associated symptoms. This case demonstrates the efficacy of integrated Ayurvedic management in idiopathic oligospermia.

Keywords: Ayurvedic management, Male infertility, Oligospermia, *Shukra Kshaya*, *Vajikarana*

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Introduction

Male infertility constitutes 20-30% of all infertility cases and represents a significant global health concern (1). One of the most prevalent underlying causes of male infertility is oligospermia, which is defined as a sperm concentration in semen that is less than 15 million sperm per millilitre (2). This disorder, also known as oligozoospermia, is diagnosed through semen analysis in accordance with World Health Organisation (WHO) guidelines, which also assess factors such as motility, morphology, and vitality. It frequently hinders natural conception after at least a year of consistent unprotected sexual activity. According to its aetiology, oligospermia results from a confluence of idiopathic, biological (such as genetic or hormonal abnormalities), behavioural (such as smoking or obesity), and environmental (such as exposure to toxins) factors, which alter spermatogenesis and lower reproductive potential (3).

Oligospermia is closely associated with *Shukra Kshaya* or *Ksheena Shukra*, which are conditions involving the depletion or weakening of *Shukra Dhatu*, the seventh and most refined tissue in the sequential formation of Dhatu (tissues) (4). Reduced semen quality and infertility (*Klaibya*) are the results of *Tridosha* imbalances, especially worsened *Vata* and *Pitta*, which are

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exacerbated by poor *Agni* (digestive fire), bad food, stress, and overexertion (5). Ayurvedic treatment modalities for *Shukra Kshaya* include *Rasayana* (rejuvenative) therapies, *Vajikarana* (aphrodisiac) drugs, *Panchakarma* (detoxification) procedures including *Virechana* (purgation) and *Basti* (enema therapy), and dietary modifications emphasising *Shukravardhaka Ahara* (foods promoting reproductive tissue nourishment) (6).

This case study demonstrates effective management of *Shukra Kshaya* (oligospermia) through integrated Ayurvedic principles combined with WHO-compliant semen analysis (7). By addressing non-invasive treatment gaps for idiopathic oligospermia and emphasising detoxification and regeneration mechanisms, this work builds upon existing research. Particularly in regions preferring traditional medicine, Ayurveda's potential as a supplementary therapy may reduce dependence on Assisted Reproductive Technologies (ART) and promote sustainable reproductive health outcomes while emphasising tailored, Dosha-based interventions (8).

Case Report

On November 7, 2024, a 32-year-old Indian male desk worker presented with the chief complaint of primary infertility following two years of unprotected intercourse with adequate frequency (two to three times per week). His female partner underwent evaluation with normal test results. The patient denied notable medical history, including no previous surgeries, chronic diseases, or allergies. Family history was unremarkable for infertility. Psychosocially, the patient reported moderate work-related stress. He maintained a sedentary lifestyle with irregular eating patterns and denied tobacco and alcohol use.

Chief Complaints and History of Present Illness:

The patient presented with the following associated features of duration 8-10 months: mild fatigue and reduced energy levels, occasional lower backache, dry skin, and irregular bowel movements (constipation alternating with loose stools). The patient denied erectile dysfunction, pain during intercourse, or genital discharge. These manifestations were clinically consistent with Vata aggravation.

Clinical Findings:

Local examination: The penis and scrotum appeared normal, with no lesions or swelling. Both testes were descended, normal in size, firm, and non-tender. The epididymis and vas deferens were palpable without obstruction. No varicocele, hydrocele, or infection was noted. Pubic hair distribution was age-appropriate. The absence of structural abnormalities supported idiopathic oligospermia, consistent with *Shukra Kshaya* from functional deficits, as confirmed by semen analysis and Ayurvedic assessments like *Astavidha Pariksha.*

Table 1: *Ashtavidha Pariksha* (Eightfold examination) (9)

Parameter	Findings
Nadi (Pulse)	74/min, *Vata-Pitta Pradhan*
Mala (Stool)	*Vibandha* (Constipation), irregular
Mutra (Urine)	*Prakrita* (Normal)
Jihva (Tongue)	*Sama* (Coated)
Shabda (Voice)	*Prakrita* (Normal)
Sparsha (Touch)	*Ruksha* (Dry)
Drik (Eyes)	*Prakrita* (Normal)
Akriti (Built)	*Krisa* (Lean and thin)

Ayurvedic Assessment: The patient was evaluated using *Asthavidha* and *Dashvidh pariksha*, and the results are presented following

Table 2: *Dashavidha Pariksha* (Ten-fold Examination)

Parameter	Findings
Prakriti (Constitution)	*Vata-Pitta*
Vikriti (Pathology)	*Shukra Kshaya* with Vata
Sara (Tissue Quality)	*Madhyama* (medium) for
Samhanana (Compactness)	*Madhyama*
Pramana (Measurements)	Height 170 cm, Weight 65 kg
Satmya (Adaptability)	Adapted to a mixed diet
Satva (Mental Strength)	*Madhyama*
Ahara Shakti (Digestive Power)	*Avara* (low)
Vyayama Shakti (Exercise	*Madhyama*
Vaya (Age)	*Madhyam* (middle age)

Diagnostic assessment/Investigations

- Total Sperm Count: 9.7 million/ejaculate (Ref: ≥39 million) – Deranged (oligospermia).
- Sperm Concentration: 9.7 million/ml (Ref: ≥16 million/ml) – Deranged.
- Total Motility: 64% (Ref: ≥42%) – Normal.
- Progressive Motility: 28% (Ref: ≥30%) – Slightly Deranged.
- Rapidly Progressive: 11%.
- Slowly Progressive: 17%.
- Non-Progressive Motility: 36% (Ref: ≤1%) – Deranged.
- Non-Motile Sperm: 36% (Ref: ≤20%) – Deranged.
- Normal Forms: 4% (Ref: ≥4%) – Borderline.
- Abnormal Forms: ~96% (inferred).
- Pus Cells (WBC): <1 million /ml (Ref: <1 million /ml) – Normal.
- pH: 8 (Ref: ≥7.2) – Normal.
- Fructose: Positive.
- No agglutination or infections

Final Diagnosis: *Shukra Kshaya* (Oligospermia)

Therapeutic Intervention

The treatment protocol focused on *Pachana* (digestive enhancement), *Shodhana* (detoxification), and *Deepana* (appetiser stimulation), followed by the administration of Ayurvedic drugs (*Ashwagandha, Kapikacchu,* and *Gokshura churnas*) and *Shukravardhaka Ahara* (diet rich in milk, ghee, and nuts) to promote *Shukra Vardhana* for managing *Shukra Kshaya* (oligospermia) (10).

Pathya-Apathya(Wholesome and unwholesome diet and lifestyle)

The patient was advised to consume Light, warm, easily digestible foods (rice gruel, mung dal soup) to facilitate the digestion of *Ama* (undigested metabolic byproducts) and support detoxification processes. *Sattvic* foods (cooked vegetables, buttermilk, whole grains) to enhance digestive capacity and absorption. *Shukravardhaka Ahara* (foods promoting reproductive tissue nourishment), including: whole milk (250 ml daily), ghee (1 teaspoon daily), dry fruits (almonds, cashews, dates 15-20 gm daily), sesame seeds, and saffron-infused milk.

After Treatment: Post-6-month Ayurvedic intervention, concentration improved to 17.7 million/ml, total count to 35.4 million, progressive motility to 49%, and normal forms to 8%, indicating a significant enhancement in semen quality.

Table 3: *Shodhan* and *Shamana* Chikitsa – Medicines with Dose, *Anupana,* and Duration

Sr. No.	Duration	Name of Medicine	Dose	*Anupana*	Time of drug administration
1	10th November 2024 to 10th December 2024	*Avipattikar Churna*	5gm	*Koshna jala* (warm water)	Once daily at bedtime
		Matra Basti: Bala Taila	60ml	-	Once a day for 10 days
2	11th December 2024 to 11th January 2025	*Agnitundi vati* 250mg	2 tablets (500mg)	*Koshna jala* (warm water)	Two times a day after food
		Matra Basti: Bala Taila	60ml	-	Once a day for 7 days
3	11th January 2025 to 10th June 2025	*Ashwagandha Churna*	3gm	Milk	Two times a day after food
		Kapikacchu Churna	3gm	*Koshna jala* (warm water)	Two times a day after food
		Gokshura Churna	3gm	*Koshna jala* (warm water)	Two times a day after food

Observations and Results

Parameter	Before Treatment (Nov 7, 2024)	After Treatment (Jun 11, 2025)	WHO Reference Range (6th Ed.)
Volume (ml)	1.0	2.0	≥1.4
Sperm Concentration (million/ml)	9.7	17.7	≥16
Total Sperm Count (million/ejaculate)	9.7	35.4	≥39
Total Motility (%)	64	73	≥42
Progressive Motility (%)	28	49	≥30
Non-Progressive Motility (%)	36	24	≤1
Non-Motile Sperm (%)	36	27	≤20
Normal Forms (%)	4	8	≥4
Abnormal Forms (%)	~96	~92	<96
Pus Cells (WBC, million/ml)	<1	<1	<1
pH	8	8	≥7.2

Discussion

The patient's symptoms, which included mild fatigue, sporadic backaches, dry skin, and irregular bowel habits, were consistent with the Ayurvedic pathology of *Shukra Kshaya*, in which vitiated *Vata* and *Pitta Doshas* impair *Agni,* resulting in *Dhatu Upashoshana* and depletion of Shukra Dhatu. This was confirmed by Astavidha Pariksha (Vata-Pittaja Nadi, coated tongue, dry Sparsha) and Dashavidha Pariksha (Vata-Pitta Prakriti, Avara *Ahara Shakti, Madhyama Shukra Sara*). These manifestations were caused by a sedentary lifestyle, stress, and an improper diet, which disrupted the sequential Dhatu nourishment and decreased the quality of semen. To address this pathology, the treatment plan was customised. It started with *Shodhana* (purification) using *Virechana*(laxation) and *Matra Basti* to balance the Doshas and eliminate *Aama*. Next, *Deepana* (enhance digestive fire)-*Pachana* (improve digestion) was used to enhance *Agni* using *Agnitundi vati*. Finally, over the course of six months, *Shukravardhana* (sperm enhancement) was performed using Rasayana drugs such as Ashwagandha, Kapikacchu, and Gokshura *Churnas*, along with *Shukravardhaka Ahara* (milk, ghee, and nuts) and *Vihara (*yoga, rest), to improve vitality and semen parameters.

Probable Mode of Action of Drugs

Avipattikar Churna contains *Trivrit* (as a mild laxative), *Triphala* (Amla, Haritaki, Bibhitaki), *Trikatu* (Ginger, Pepper, *Pipali*), *Musta, Vidanga, Ela, Patra, Lavanga*, and *Sharkara* (sugar/candy)is a polyherbal formulation that primarily functions as a *Deepana-Pachana* (appetiser and digestive) agent by balancing *Vata-Pitta*, promoting gut health, reducing constipation, and promoting better *Dhatu* nourishment in conditions like *Shukra Kshaya*. It also helps to alleviate *Aama* (toxins) accumulation and hyperacidity by strengthening *Jatharagni* (digestive fire) and reducing *Pitta Dosha* (11).

Bala Taila as mentioned in classical texts for its role in treating *Vata* disorders and promoting overall tissue integrity, when taken as *Matra Basti*, acts as a *Balya* (strengthening) and *Vatahara* (Vata-pacifying) agent, nourishing reproductive tissues and enhancing vigor through its *Snigdha* (unctuous) and *Guru* (heavy) *Gunas*, which penetrate deeply via the rectal route to balance *Vata Dosha*, reduce inflammation, and support *Shukra Dhatu* formation (12).

Agnitundi Vati, through its *Ushna Virya* (hot potency) and ingredients like *Kuchala* and *Triphala,* which reduce *Kapha* and *Vata Doshas* while addressing neurological disorders, exhibits *Deepana* (appetiser) and *Pachana* (digestive) actions by stimulating *Agni* and alleviating *Aama.* This improves metabolic processes, enhances nutrient absorption, and supports *Dhatu Poshana* (tissue nourishment), making it useful in the phases leading up to *Shukra* enhancement (13).

Gokshura Churna, through its *Madhura Rasa* (sweet taste), *Guru-Snigdha Gunas* (heavy and unctuous qualities), and *Sheeta Virya* (cold potency), functions as a *Vrushya* (aphrodisiac) and *Shukravardhaka* (semen enhancer). These properties stabilise Vata-*Pitta Doshas*, encourage testosterone-like effects, and revitalise reproductive tissues, improving *Shukra* quality and quantity in oligospermia-like conditions, as evidenced by its diuretic and rejuvenating qualities in *Dravyaguna* texts (14).

Ashwagandha Churna is a *Rasayana* (rejuvenator) and adaptogen that improves fertility by boosting sperm count, motility, morphology, and reproductive function through its *Balya* (strengthening) and *Vrushya* properties, which balance *Vata Dosha*, lower stress levels, and encourage *Shukra Dhatu* nourishment (15).

Kapikacchu Churna, stated for its role in sexual and nervine disorders, functions as a powerful *Vrushya* (aphrodisiac) with *Madhura Rasa*, *Guru-Snigdha Gunas, Madhura Vipaka,* and *Sheeta Virya*, which nourish *Shukra Dhatu*, enhance the quality and quantity of semen, and support neurological functions via L-DOPA content. This helps to address *Kshina Shukra* by boosting vitality and reproductive efficacy (16).

Before treatment

Name :			
Ref. By :			
Bill. Loc. :		Pt. Loc :	
Reg Date and Time : 11-Jun-2025 17:04	Sample Type : Seminal Fluid	Mobile No. : 9726510990	
Sample Date and Time : 11-Jun-2025 17:04	Sample Coll. By : NSTR	Ref Id1 :	
Report Date and Time : 11-Jun-2025 17:47	Acc. Remarks : -	Ref Id2 :	

TEST	RESULTS	UNIT	BIOLOGICAL REF RANGE	REMARKS
SEMEN ANALYSIS				
Consistency	Viscous			
Liquifaction	After 30 minutes			
Microscopic Examination				
Vitality	70	%	55 - 75	
Auto Agglutination	Not Present			
Trichomonas Vaginalis	Nil			
Fructose				
Fructose	Positive		Positive	
Normal forms	08	%	Greater than or equal to 4%	

---------- End Of Report ----------

After Treatment

LABORATORY REPORT

Name : [redacted]	Sex/Age : [redacted]	Case ID : 41103200645	
Ref. By : [redacted]	Dis. At :	Pt. ID : 5009536	
Bill. Loc. :		Pt. Loc :	
Reg Date and Time : 07-Nov-2024 09:21	[redacted]ype : Seminal Fluid	Mobile No. : [redacted]	
Sample Date and Time : 07-Nov-2024 09:21	Sample Coll. By : NSTR	Ref Id1 :	
Report Date and Time : 07-Nov-2024 10:30	Acc. Remarks :	Ref Id2 :	

TEST	RESULTS	UNIT	BIOLOGICAL REF RANGE	REMARKS
SEMEN ANALYSIS				
Consistency	Viscous			
Liquifaction	After 30 minutes			
Microscopic Examination				
Vitality	75	%	55 - 75	
Auto Agglutination	Not Present			
Trichomonas Vaginalis	Nil			
Fructose				
Fructose	Positive		Positive	
Normal forms	4	%	Greater than or equal to 4%	

---------- End Of Report ----------

SQA-iO AUTOMATED SEMEN ANALYSIS RESULTS

SQA-iO MES - Signal Processing Technology

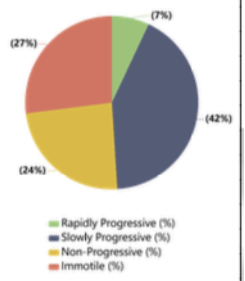
PATIENT INFORMATION:

FIRST NAME:	[redacted]	LAST NAME:	[redacted]
PATIENT ID:	6150603201848	AGE:	32
REFERRING DOCTOR:	[redacted]	PHONE NUMBER:	[redacted]

SAMPLE INFORMATION:

SAMPLE ID:	6150603201848	DEBRIS:	None/Few < 10%
TEST TYPE:	FRESH	APPEARANCE:	Normal
COLLECTED DATE | TIME:	06/11/2025 | 5:12 PM	VISCOSITY:	Normal
RECEIVED DATE | TIME:	06/11/2025 | 5:34 PM	LIQUEFACTION:	0-30 Minutes
TEST DATE | TIME:	06/11/2025 | 5:37 PM	ABSTINENCE (days):	5
CRITERIA:	WHO 6th	SAMPLE TESTED:	FULL VOLUME
VOLUME (ml):	2	COLLECTED AT:	hospital
WBC CONC. (M/ml):	<1	FRUCTOSE:	present
pH:	8		

PARAMETER	RESULT	UNITS	REF. VALUE		MOTILITY GRAPH
CONCENTRATION	17.7	M/ml	>=16		
MOTILITY	73	%	>=42		
PROGRESSIVE	49	%	>=30		
RAPIDLY PROGRESSIVE	7	%			
SLOWLY PROGRESSIVE	42	%			
NON-PROGRESSIVE	24	%	<=1	↑	
IMMOTILE	27	%	<=20	↑	
NORMAL FORMS	8	%	>=4		
MOTILE SPERM CONC.*	13.0	M/ml	>=6		
PROG. MOTILE SPERM CONC.*	8.8	M/ml	>=5		
RAPID PR. MOTILE SPERM CONC.*	1.3	M/ml			
SLOW PR. MOTILE SPERM CONC.*	7.5	M/ml			
FUNCTIONAL SPERM CONC.*	1.6	M/ml	>0.2		
VELOCITY (VCL)*	29	mic/sec	>=5		
SPERM MOTILITY INDEX*	49	---	>=80	↓	



*MES parameters are indicated by an asterisk

SQA-iO AUTOMATED SEMEN ANALYSIS RESULTS

SQA-iO MES - Signal Processing Technology

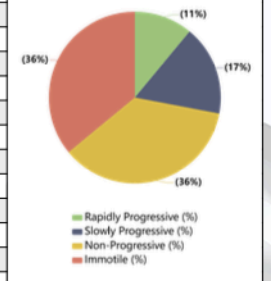
PATIENT INFORMATION:

FIRST NAME:	[redacted]		
PATIENT ID:			
REFERRING DOCTOR:			

SAMPLE INFORMATION:

SAMPLE ID:	6141103200645	DEBRIS:	None/Few < 10%
TEST TYPE:	FRESH	APPEARANCE:	Normal
COLLECTED DATE | TIME:	11/07/2024 | 9:25 AM	VISCOSITY:	Normal
RECEIVED DATE | TIME:	11/07/2024 | 10:00 AM	LIQUEFACTION:	0-30 Minutes
TEST DATE | TIME:	11/07/2024 | 10:08 AM	ABSTINENCE (days):	4
CRITERIA:	WHO 6th	SAMPLE TESTED:	FULL VOLUME
VOLUME (ml):	1	COLLECTED AT:	HOSPITAL
WBC CONC. (M/ml):	<1	FRUCTOSE:	PRESENT
pH:	8		

PARAMETER	RESULT	UNITS	REF. VALUE		MOTILITY GRAPH
CONCENTRATION	9.7	M/ml	>=16	↓	
MOTILITY	64	%	>=42		
PROGRESSIVE	28	%	>=30	↓	
RAPIDLY PROGRESSIVE	11	%			
SLOWLY PROGRESSIVE	17	%			
NON-PROGRESSIVE	36	%	<=1	↑	
IMMOTILE	36	%	<=20	↑	
NORMAL FORMS	4	%	>=4		
MOTILE SPERM CONC.*	6.2	M/ml	>=6		
PROG. MOTILE SPERM CONC.*	2.7	M/ml	>=5	↓	
RAPID PR. MOTILE SPERM CONC.*	1.1	M/ml			
SLOW PR. MOTILE SPERM CONC.*	1.6	M/ml			
FUNCTIONAL SPERM CONC.*	0.3	M/ml	>0.2		
VELOCITY (VCL)*	16	mic/sec	>=5		
SPERM MOTILITY INDEX*	25	---	>=80	↓	



*MES parameters are indicated by an asterisk

TOTALS PER EJACULATE	RESULT	UNITS	REF. VALUE	
SPERM #	35.4	M/ejac	>=39	↓
MOTILE SPERM*	26.0	M/ejac	>=16	
PROG. MOTILE SPERM*	17.6	M/ejac	>=12	
FUNCTIONAL SPERM*	3.2	M/ejac	>0.6	
MORPH. NORMAL SPERM*	2.8	M/ejac	>=2	

TOTALS PER EJACULATE	RESULT	UNITS	REF. VALUE	
SPERM #	9.7	M/ejac	>=39	↓
MOTILE SPERM*	6.2	M/ejac	>=16	↓
PROG. MOTILE SPERM*	2.7	M/ejac	>=12	↓
FUNCTIONAL SPERM*	0.3	M/ejac	>0.6	↓
MORPH. NORMAL SPERM*	0.4	M/ejac	>=2	↓

Conclusion

The case study demonstrated successful management of oligospermia (*Shukra Kshaya*) using a six-month Ayurvedic protocol, including *Shodhana (Virechana, Basti), Deepana-Pachana (Trikatu*), and *Shukravardhana (Ashwagandha, Kapikacchu, Gokshura*) with a nourishing diet and lifestyle changes. The patient experienced relief from fatigue and irregular bowels, regaining vitality with no adverse effects. This underscores Ayurveda's potential as a safe complementary approach for idiopathic infertility, warranting further research for broader application.

Declaration of Patient consent: Patients have consented to publication of their clinical details and images in the journal, understanding that names/initials will not appear, identity will be concealed where possible, though anonymity is not assured.

Conflict of interest: None

Source of funding: None declared

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