

Ayurvedic management of Vandhyatwa with special reference to male infertility: A case study

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Abstract

Infertility is the failure of a couple to become pregnant after one year of regular unprotected intercourse. Male infertility can be defined as an inability to induce conception due to defect in spermatogenic function. The male carrying pathology in semen production includes low sperm count, volume motility, abnormal forms and sperm functional tests. Ayurveda explains *Asthasukradrushti* which impairs normalcy as the main reason for the infertility. Study conducted on male infertility has revealed that about 1 in every 3 cases are due to fertility issues in the male partner. Hence, male infertility in current times is an alarming issue that needs highest attention. A 28-year-old male patient who had been diagnosed as oligospermia, with low sperm count and few non-motile spermatozoa with 5 years of married life and his wife with regular ovulatory cycle. After having *Deepan/Pachan, Shodhan (Matrabasti)* and *Shamanchikitsa* showed the improvement in the seminal parameters and resulted in pregnancy. This shows the efficacy of Ayurvedic treatment in the management of male infertility.

Keywords: Infertility; Oligospermia; Shaman; Shodhan

1. Introduction

Though population in the world day by day, yet 20-30 % population of the world are the victims of infertility owing to impaired sperm production or its function. Improper ejaculation impairs its function sperm delivery due to vicious life style and abnormal environmental exposure. Infertility is defined as failure of couple to conceive after 12 months of regular intercourse without using any contraception. Male infertility means inability to cause a pregnancy in a fertile female. [1] W.H.O.'s multi-centre study reveals that 20 % cases were attributed to male factors, 38 % cases were attributed to female factors, 27 % had casual factors identified in both partners and 15 % could not be satisfactorily attributed to either partner. [2]

In Indian couples seeking treatment the male factor is the cause in approximately 23% oligospermia and *Shukradusti*. [3] The male infertility can be complete or partial termed as sub-infertility males were considered infertile with sperm parameter and the most significant of these are reduced number of spermatozoa, reduced sperm motility (asthenozoospermia), reduced sperm vitality (necrozoospermia). Abnormal sperm morphology (teratozoospermia) or any combination of these oligospermia is a combination of reduced sperm motility and low spermatozoa count. [4]

Vajikaran is the specialised branch of Ayurved dealing with *Shukradrusti* and *Klaibya*. *Shukradrusti* is an acquired quantitative abnormality. *Shukradusti* caused by faulty diet, psychological, traumatic factor and chronic debilitating

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illness. [5] That results individual becomes *Klaibya*(erectile dysfunction and premature ejaculation) and there is a *Aharsha*(decreases sexual desire) *Ksheenashukrais* included in one of the varieties of *Ashtavidhashukradrushti* when *Vata* and *Pitta* doshas are vitiated the quality and quantity of *Shukra* alters and resulting into *Shukradrushti* specially *Ksheena Shukra*. Ayurveda gives emphasis to the treatment of *Shukradrushti* and *Shukrapravartakathose* in terms of increasing sperm count and motility by using *Vajikaran dravya*.

1.1. Cause of oligosthenozoospermia

- Infection
- Lifestyle
- Ejaculation issue
- Hormone imbalance
- Overheating testicles
- Drug and alcohol
- Genetic factors
- Traumatic factors

1.2. Case study

A 28 year old male patient resident of Hadapsar, Pune, occupationally driver moderately build, married before 5 years attended to OPD of SSAM, Pune with the complaint of decrease sexual desire and erectile dysfunction as well as premature ejaculation.

On the basis of patients complaint and semen analysis report, patient was diagnosed as Oligosthenozoospermia.

1.3. History of present illness

Patient was apparently normal 5 years back. After getting married he was unable to conceive his partner even after regular unprotected sexual intercourse and inability to maintain prolonged erection. He attained normal puberty and he was non-diabetic, non-hypertensive with good physical built. His appetite was normal with regular bowel habits. He had chronic history of tobacco chewing since 6 years. His partner was normal on clinical and endocrinological investigation. She had regular menstrual cycle and no history of any reproductive tract disease or any surgery. His semen analysis reveals three subsequent sample shows Oligosthenozoospermia.

1.4. History of past illness

- No history of any major illness in the past
- No history of DM, HTN, Thyroid disturbances
- No history of trauma, pelvic surgery
- No history of drug allergy

1.5. Family history

No significant family history

1.6. Personal history

- Diet mixed
- Addiction – tobacco chewing (5 years)
- Sleep 6-7 hours/day
- Occupation – Driver
- Education – 10th pass
- Bowel habits – regular 1 time/day
- Micturation – 4-5 times / day

1.7. General examination

- Built – well built
- Gait – not affected
- Clubbing/cyanosis/Icterus – absent
- Pallor – absent

1.8. Systemic examination

- CVS- S1S2 normal
- CNS – conscious/oriented/sensory/mental function normal
- Per abdomen – soft/non tender

1.9. Reproductive system

- Prepuce skin – normal with both testes are distended
- Proper hygiene maintained
- Testicles – No tenderness
- No varicocele, no oedema, no redness
- Penis – no abnormality detected
- Secondary sexual characters normal (pubic hair/axillary hair/beard/moustache)

1.10. Vital sign

- Pulse rate – 82/min
- Weight – 70 kg
- Respiratory rate – 16/min
- Blood pressure – 130/70
- Temperature – 98 F

1.11. Ayurvedoktapariksha

- *Ashtavidhpariksha*
- *Nadi* – 82/min (*samanadi*)
- *Mala*- regular 1 time/day (*no vibandha/gandha*)
- *Mutra* – 4-5 times/day
- *Jivha*- *Niram*
- *Shabdha*- *prakrut*
- *Sparsha* – *khara*(*prakruta*)
- *Druk*- *prakrut*
- *Akruti* – *madhyama*

1.12. Dashavidhpariksha

- *Prakruti* – *kapha-vataja*
- *Vikruti* – *Dosha-vata, pitta/ Dushya* – *rasa, majja, shukra*
- *Sara* – *madhyama*
- *Samhanan* – *madhyama*
- *Pramana* – *madhyama*
- *Satmya* – *madhura, lavana, katu*
- *Satwa* – *madhyama*
- *Aharashakti* – *abhyavaranashakti* – *madhyama*
- *Jaranashakti* – *prakruta*
- *Vyayamashakti* – *pravara*
- *Vaya* – *madhyama*

1.13. Rogapariksha – Nidanapanchak

Nidana – Atisevana of Amla, Lavana, Katu Ahara Dravya, Atisevana of Ruksha and Ushna, Ativyavyama, Virudha Ahar, Vihara.

1.14. Poorvarupa

Phenila Shukra, Tanu Shukra, Ruksha Shukra

1.15. Roopa

Linga Shaithilya, Glana Shishnata, Nirbeeja/Nirveerya

1.16. Upashaya*Vrushya, Bruhana***1.17. Anupshaya***Vata Vardhaka Ahara (Ruksha, laghu)**Vata vardhaka vihara (Ativyavyayam/Ativyayam)***1.18. SampraptiGhataka**

- *Dosha – Tridosha with vata-pitta pradhana (Vyanavata/Apanavata)*
- *Dushya – Rasa, Majja, Shukra pradhana*
- *Agni – Dhatwagnijanya Ama*
- *Strotas – Rasovaha, Majjavaha, Shukravaha and Manovaha*
- *Strotodushti – Sanga*
- *Adhithana – Shukravahastrotas (Vrushan and Medra)*
- *Udbhava sthana – Pakwashaya*
- *Vyakta sthana – Apan kshetra (Vrushan and Medra)*
- *Sanchara sthana – Rasavaha, shukravahasrotas*
- *Vyadhiswabhabha – Chirakari*
- *Rogamarga – Abhyantara*
- *Sadhyasadhyatva – Krichhrasadhya*

Table 1 Treatment chart

Sr. no.	Medicine	Dose	Anupan	Kal	Duration	
1	<i>Deepan/Pachan-Lavanbhaskarachoorna</i>	2 gm twice a day	<i>Koshna Jal</i>	<i>Sagras</i>	1 Month	
2	<i>Shodhanchikitsa-BalatailaMatrabasti (Withpurvakarma, Snehan with Swedan)</i>	60 ml/day	-	After Breakfast	7 days	
3	<i>Shamanchikitsa-Choorna of Ashwagandha + Kapikacchu +Shewta Musali +Gokshura + Shatavari +Yashtimadhu +Makaradwaja – 30 mg</i>	each 500mg	Approx. 3 gm twice a day	with <i>Goghruta</i>	<i>Vyanoapan</i>	3 month

1.19. Shodhana Chikitsa

1.19.1. Basti

Acharya Shushruta explained that there was vitiation of *Apanavayu* and *Vyanavayu* in the *Shukradosha*.^[6] *Shukra* occupied in the whole body.^[7] and *Apanavayu* is responsible for the proper expulsion of *Shukradhatu*.^[8] vitiation of *Apanavayu* can impair the function of *Shukra*. *Basti* therapy is specifically designated to treat *Vatavikaras*.^[8] Acharya Charaka also specially mentioned *Bastikarma* for *shukradoshas*.^[9] Therefore drug which can administered in *Basti* form are said to enhance the quantity and quality of *Shukra*.^[10]

1.19.2. Shaman Chikitsa

Ashwagandha (withaniasomniferadunal)

Which enhance the spermatogenesis via a presumed testosterone like effect.^[11] *Ashwagandha* is a very effective medicine for male infertility as a digestive, it corrects metabolism and helps to provide proper nutrition. It is effective in mental disorder as well as helpful in sexual disorder like erectile dysfunction and Oligozoospermia.^[13]

Kapikacchu (mucunapurins bark)

Which has been found to increase sperm concentration and motility. In Oligosthenozoospermia patient significantly improves testosterone, LH, Dopamine Adrenaline and Noradrenaline in infertile male and reduced level of Prolactin also there is improvement in sperm count and motility.^[14]

1.20. Shweta Musali

The dried roots of *Shweta Musli* (also known sasparagus) are used in *Ayurveda* as an aphrodisiac. Its tubers are used in *Ayurvedic* medicine preparations. It contains about 30% alkaloids, natural steroids saponin (10-20%), polysaccharoids (40 to 45%), carbohydrates and proteins (5% to 7%). White *Musli* or *Shweta Musli* is primarily used as a tonic to rejuvenate the reproductive system. It works by its *shukrala* (beneficial effect on male sexual health), *rasayana* (adaptogenic activity) and *balya* (general health tonic). The regular use of this herb is valuable in impotency, premature ejaculation and low sperm count in men. As it is very rich in glycosides, it works very well in curing impotency and low sperm count.

1.21. Gokshura

(*Tribulus terrestris* Linn.), which raises testosterone levels. *Gokshura* has *Madhura* (sweet), *Guru* and *snigdha* (unctuous and heavy quality), *Sheeta* (Cold in Potency), *Vrishya* (Aphrodisiac), *Rasayana* (Rejuvenator), *Brimhana* (Nourishing therapy), and *Vatapittahara* properties. *Vatapittahara* *Karma* is very useful in cases of *Kshina Shukra*, as it is a *Vata*- and *Pitta*- predominant disease. However, *Madhura Rasa*, *Snigdha*, and *Guru Guna* increase the *Shukra Dhatu* qualitatively and quantitatively. *Gokshura* is known for its utility in *Mutravaha Srotas*, by correction of the *Apana Vata*, it exerts action on the *Shukra* also, along the lines similar to how *Shukra Visarga* is governed by *Apana Vata*. *Tribulus terrestris* contains three groups of active phytochemicals. They are Dioscin, protodioscin, and diosgenin. Protodioscin is a potent natural precursor of the testosterone enhancer. It also increases the production of Testosterone in another natural way. *Tribulus* leads to the production of the luteinizing hormone (LH). When the LH levels are increased, the natural production of testosterone also increases. LH is a hormone that also deals with sex drive. LH has been used to increase fertility and helps to relieve impotence. This study shows significant remission in the signs and symptoms of *Kshina Shukra*.

1.22. Shatavari

(*Asparagus racemosus* Willd.), which appears to enhance fertility by reducing oxidative stress.

1.23. Yashtimadhu

(*Glycyrrhiza glabra* Linn.), found to improve semen quality.

1.24. Makardhwaja

Makardhwaja is an *Ayurvedic* formulation. This formulation is known to prepare for combination of herbs and minerals. It acts as aphrodisiac property. This medicine helps to maintain all *dosha*; *vata*, *pitta*, *kapha* and treat problems related to increase age and sexual health. It contains *Shudhdhaswarana*, *shudhdhaparada*, *shudhdhagandhaka*, *karpasa* and *kumara*.^[14]

Observation

Table 2 Observation of Semen analysis report

Treatment	Before	After
Date	12/09/21	15/10/21
Total sperm count	58.5	75.5
Motile	35%	62%
Non motile	65%	38%
Atypical form	08%	07%
Impression	Hypomotility	Motility present

2. Discussion

After *shodhana* and during fifth follow up of *shaman* therapy, patient has reported his wife conceived. After that semen analysis revealed and significant improvement was seen on parameters like sperm count, motility. oligosthenozoospermia can be correlated with *shukrakshaya* or *ksheenshukradushti*. Necrozoospermia can be correlated with *vatajshukradushti* where the quality and quantity of sperm is vitiated by *vata* doshas as per Ayurvedic text. *Shodhan* should be done before *vajikaranchikitsa* as *shukrais saumya* and *jalamahabhutpradhan dhatu*. *Shukrakashya* is said due to increased pitta doshas and motility decreased due to vitiated *vata* hence *basti karma* lower the vitiated *vata* doshas, it also facilitates *dhatwagni*. Hence increase formation of new *shukra dhatu* after treatment of *shodhan* therapy all *strotavrodh* get decreased and regulate body function properly. After that *shaman chikitsa* like *deepan, pachan, balya* and *vajikarandraavya* increases digestive and immunity power of whole body.

So, here we see that use of *deepan* and *Pachan* drugs like *lavanbhaskarchoorna* reduces AMA (toxins) formation in the stomach and intestine thus it detoxifies the body and the elimination of the toxic chemicals from the body. It mainly acts on the stomach and modulates the secretions of gastric acid and thus improves appetite and means as per Ayurveda *itrasa* and *raktavahaposhak*. Also *vajikarand* drugs like *makardhwaj* and *kapikachhu* drugs *gunalaghu, chalasukshma* and *shukravrudhhikarshukrajanan* etc. by *karma*. *Madhur vipaka* and *sheet virya* improved states of *dhatu* as well as the action of ingredients showed increase sexual desire, erectile function, ejaculatory function, frequency, duration of coitus and sperm motility.

3. Results

Total duration of treatment in 1 month initial sperm count was 58.5% millions/ml, non-motile 65% and hypo motility occurs. After treatment count observed that 75.5% millions/ml, motile 62%, non-motile 38% and motility present being sperm count increases and motility and morphology was excellent progressive *gharbhadharna* occurs after 5 months.

4. Conclusion

Ayurvedic *sidhhanta* are key to clinical success without any adverse effect. Only *shukravardhanachikitsa* is not crucial regarding treatment of oligosthenozoospermia rather one has to think about other factors like *deepana, pachana, shukragatavatachikitsa* and *shukrashodhanachikitsa*.

Compliance with ethical standards

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Disclosure of conflict of interest

The authors declare that there was no conflict of interest regarding the publication of manuscript

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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Author's short biography



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