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 inability to induce conception due to defect in spermatic function. The male carrying pathology in semen production includes low sperm count, volume motility, abnormal forms and sperm functional tests. Ayurveda explains Asthasukradrushti which impair the normalcy as the main reason for the infertility. Study conducted on male infertility have revealed that about 1 in every 3 cases are due to fertility issue in male partner. Hence, the male infertility in current times is an alarming issue that needs highest attention. A 28 Year, male patient who had been diagnosed as Oligosthenozoospermia, 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; Oligosthenozoospermia; Shaman; Shodhan

1. Introduction

Though population in the world day by day, yet 20-30 % population of the world are the victim of the infertility are owing to impaired sperm production or its function. Improper ejaculation impaired 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 course 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% Oligosthenozoospermia 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 (Tetrozoospermia) or any combination of these Oligosthenozoospermia 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. Shukradusthi caused by faulty dietic, 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) Ksheenashukra is 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

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

1.12. Dashavidhapariksha

- Prakruti - kapha-vataja
- Vikruti - Doshaja-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


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

**Table 1 Treatment chart**

<table>
<thead>
<tr>
<th>Sr. no.</th>
<th>Medicine</th>
<th>Dose</th>
<th>Anupan</th>
<th>Kal</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Deepan/Pachan-Lavanbhaskarachoorna</td>
<td>2 gm twice a day</td>
<td>Koshna Jal</td>
<td>Sagras</td>
<td>1 Month</td>
</tr>
<tr>
<td>2</td>
<td>Shodhanchikitsa-BalatailaMatrabasti (Withpurvakarma, Snehan with Swedan)</td>
<td>60 ml/day</td>
<td>-</td>
<td>After Breakfast</td>
<td>7 days</td>
</tr>
<tr>
<td>3</td>
<td>Shamanchikitsa-Choorna of Ashwagandha + Kapikacchu + Shewta Musali + Gokshura + Shattavari + Yashhtimadhu + Makaradwaja – 30 mg</td>
<td>Approx 3 gm twice a day with Goghruta</td>
<td>Vyanopan</td>
<td>3 month</td>
<td></td>
</tr>
</tbody>
</table>

1.19. **Shodhana Chikitsa**
1.19.1. Basti

Acharya Shushruta explained that there was vitiation of Apanavaya and Vyanavaya in the Shukradosha.\cite{6} Shukra occupied the function of Shukra. Basti therapy is specifically designated to treat Vaativikaras. \cite{6} Acharya Charaka also specially mentioned Bastikarma for shukradoshas. \cite{9} Therefore drug which can administered in Basti form are said to enhance the quantity and quality of Shukra. \cite{10}

1.19.2. Shaman Chikitsa

Ashwagandha (withaniasomniferadunal)

Which inhance the spermatogenesis via a presumed testosterone like effect. \cite{13} 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. \cite{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. \cite{14}

1.20. Shweta Musali

The dried roots of Shweta Musli (also known asparagus) are used in Ayurveda asanaphrodisiac. Its tubersareusedin Ayurvedic medicine preparations. It contains about 30% alkaloids, natural sterolsoapnin (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 (adaptogenicity) and balya (general health tonic). The regular use of this herb is invaluable in impotency, premature ejaculation and low sperm count in men. Asitivorichyoxyglossides, it works very well in curing impotency and low sperm count.

1.21. Gokshura

(Tribulus terrestris Linn.), which raises testosterone levels. Gokshurahas Madhurarasa (sweet), Guru and snigdhaguna (unctuous and heavy quality), SheetaVirya (Cold in Potency), Vrishya (Aphrodisiac), Rasayana (Rejuvenator), Brimhana (Nourishing therapy), and Vatapittahara properties. Vatapittahara Karmais very useful in case of Kshina Shukra, asitisa Vataand Pitta- predominant disease. However, Madhura Rasa, Snigdha, and Guru Gunà increase the Shukra Dhatu qualitatively and quantitatively. Gokshurais 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. Tribulusterrestir contains three groups of active phytochemicals. They are Dioscin, protodioscin, and diosgenin. Protodioscin has potential natural precursor of the testosteron enhancer. It also increases the production of Testosterone 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

Makardhwajais 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, kaphaand treat problems related to increase age and sexual health. It contains Shudhhdaswarana, shudharpada, shudhdhagandhaka, karpasaand kumara.  \cite{14}
Observation

Table 2 Observation of Semen analysis report

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>12/09/21</td>
<td>15/10/21</td>
</tr>
<tr>
<td>Total sperm count</td>
<td>58.5</td>
<td>75.5</td>
</tr>
<tr>
<td>Motile</td>
<td>35%</td>
<td>62%</td>
</tr>
<tr>
<td>Non motile</td>
<td>65%</td>
<td>38%</td>
</tr>
<tr>
<td>Atypical form</td>
<td>08%</td>
<td>07%</td>
</tr>
<tr>
<td>Impression</td>
<td>Hypomotality</td>
<td>Motility present</td>
</tr>
</tbody>
</table>

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 shukrakshayaor ksheeshshukradushti. Necrozoospermia can be correlated with vatajshukradushtwhere the quality and quantity of sperm is vitiayed by vataodshas as per Ayurvedic text. Shodhanshould be done before vajikarananchikitsas shukrains saumya and jalamahabhutpradhan dhatu. Shukrakshayais said due to increased pitta doshas and motility decreased due to vitiayed vatahence basti karma lower the vitiayed vata doshas, it also facilatesdhatwagni. Hence increase formation of new shukra dhatu after treatment of shodhantherapy all strotavrodhget decreased and regulate body function properly. After that shaman chikitsalike deepan, pachan, balyaand vajikaraandraavya increases diagestive and immunity power of whole body.

So, here we see that use of deepanand Pachan drugs like lavanbhaskarchooranreduces 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 au per Ayurveda itrasa and raktavahaposhak. Alsovajikakrandrugs like makardhwaj and kapikachhur drugs gunalaghu, chalasukshmaand shukravrudhnikshukrajananetc. by karma. Madhur vipakaand sheet viryaimproved states of dhatus 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 gharbhadharnaoccurs after 5 months.

4. Conclusion

Ayurvedic sidhantasare key to clinical success without any adverse effect. Only shukravardhananchikitsais not crucial regarding treatment of oligosthenozoospermia rather one has to think about other factors like deepana, pachan, shukragatavachikitsaand shukrashodhanchikitsa.

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.

References


Author’s short biography

I am working as an Ayurved Physician, Panchakarma Specialist since 17 Years. I am a BOARD OF STUDIES MEMBER for Paraclinical Ayurved Board of Maharashtra University of Health Sciences Nashik. I am a FACULTY MEMBER for Post Graduate Paraclinical Ayurved Board of Maharashtra University of Health Sciences, Nashik. I am working as a Research Faculty for Research Methodology and Medical Statistics of Maharashtra University of Health Sciences, Nashik. I am a Ph.D. GUIDE for five Ph.D. Kayachikitsa (Medicine) students and M.D. GUIDE for 26 M.D. Kayachikitsa (Medicine) students out of which 18 M.D. Kayachikitsa (Medicine) students. My research experience is 14 Years. My research interest in Anxiety Disorder, Diabetes Mellitus, Obesity, Hyperacidity, Diarrhoea, Anaemia etc.