



Ayurvedic Management of Asthenozoospermia- A Case Study

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ABSTRACT:

Infertility and problems of impaired fecundity have been a concern through ages and is significant clinical problem today. Of all infertility cases, about 40-50% is due to male factor. In this case a couple with complaints of inability to be get a child even after 3 ½ years of unprotected sexual life attended the OPD of Govt. Ayurveda college Thiruvananthapuram. On detailed evaluation, the semen analysis of male partner aged 33 years showed reduced sperm motility, increased liquefaction time and increased viscosity. The patient was assessed based on sexual functional parameters and semen analysis. The semen analysis report showed increased viscosity, liquefaction time above 60 min and active sperm motility 10% and sluggish motile 35%. According to Ayurveda, the patient was diagnosed as having *Granthi shukradushti*, with investigations showing evidence of Asthenozoospermia. He was treated with *sodhana chikitsa* (Purification therapy) followed by *samana chikitsa* (Pacification therapy) for a period of 3 months. The treatment was done as OP level management. Initially *Virechana* was done with *Avipathy churna* then *Samana oushadhis* like *Varanadi kasaya*, *Aswagandarishtha*, and *Phalasarpi* were given for a period of 3 months. *Virechana* with *Avipathy churna* was repeated on every 2 weeks. The semen analysis was repeated after 3 months and the report showed significant improvement in the semenogram result.

Keywords- Male infertility, Asthenozoospermia, *Granthi shukradushti*, *Virechana*

INTRODUCTION

Infertility is a disease of the reproductive system and is defined as the inability of a couple to conceive even after one year of unprotected, frequent sexual intercourse. In Indian couples seeking treatment, the male factor is the cause in approximately 23%. A recent report on the status of infertility in India, states that nearly 50% of infertility is related to the reproductive anomalies or disorders in the male. As female and male causes often co-exist, it is important that both partners are investigated for infertility

and managed together. Overall, the male factor is substantially contributory in about 50% of all causative factors of infertility.¹

Spermatozoa travel a long distance to meet and fertilize the oocyte, so sperm motility is a requisite for normal fertilization. Asthenozoospermia or low sperm motility is a common cause of human male infertility. The prevalence was 18.71 % for asthenozoospermia and 63.13% for asthenozoospermia associated with oligo or teratospermia.²



Currently no definite treatment is available to improve sperm quality. Various assisted reproductive techniques, especially Intracytoplasmic sperm injection (ICSI), are increasingly used. In this case study a couple with complaints of inability to be get a viable child even after 3 ½ years of unprotected sexual life attended the OPD of Govt. Ayurveda college Thiruvananthapuram. The semen analysis of male partner aged 33 years shows reduced sperm motility, increased liquefaction time and increased viscosity. In Ayurveda this condition may be correlated with *Granthi sukradushti*. He was treated with *sodhana chikitsa* followed by *samana chikitsa* for a period of 3 months. The semen analysis taken after 3 months of treatment showed normal semenogram.

CASE REPORT

A couple with c/o inability to be get a viable child even after 3 ½ years of unprotected sexual life attended the OPD of Govt. Ayurveda college Thiruvananthapuram. The couple had not used any contraceptive measures during this period and had normal sexual intercourse on almost every day. On detailed evaluation, the semen analysis of male partner aged 33 years showed reduced sperm motility, increased liquefaction time and increased viscosity. The male partner denied any history of sexual dysfunction like erection, orgasm, or ejaculation and he was not taking any medication for systemic disorders like hypertension, diabetes mellitus etc. No history of previous genital tract surgery, testicular trauma or history of radiation/chemical exposure. He had a history of mumps during pubertal period. There was no history of gonadotoxic medication. His partner is a 31-year-old woman with known fertility concerns. The female partner conceived thrice but got aborted at first trimester. After investigating the couple, female partner was diagnosed with Torch infections, low AFC and highly allergic to dusts, Transvaginal ultrasound revealed low AFC count. She reports regular menses, and she is having history of PCOD & took medications for that and highly allergic to dust.

On examination

Clinical examination revealed no physical and systemic abnormality. During scrotal examination, temperature was found normal and no swelling noticed. Position and size of the testes was normal. Prostate was normal during the examination.

Assessment criteria

The patient was assessed based on sexual functional parameters and semen analysis before and three months

after the treatment. Details of the investigations carried out before the treatment was as follows.

Semen analysis – 23/6/2019 (Table no 1)

Treatment

According to Ayurveda, the patient was diagnosed as having *Granthi shukradushti*, with investigations showing evidence of Asthenozoospermia. He was treated with *sodhana chikitsa* followed by *samana chikitsa* for a period of 3 months.

The treatment was done as OP level management. Initially *Virechana* was done with *Avipathy churna* then *Samana oushadhis* like *Varanadi kasaya*, *Aswagandarishtha* and *Phalasarpis* were given for a period of 3 months. *Virechana* with *Avipathy churna* was repeated on every 2 weeks. Table no. 2

The semen analysis was repeated after 3 months and the report showed significant improvement in the semenogram result.

RESULTS

The semen analysis taken after 3 months of treatment shows marked improvement in results.

Semen analysis- 21/9/2019 (Table no 3)

DISCUSSION

Asthenozoospermia is characterized by reduced motility of ejaculated spermatozoa and is detected in more than 40% of infertile patients. The motility of a spermatozoon is categorized as progressive motility (PR), non-progressive motility (NP) or immotility (IM). A male is diagnosed with asthenozoospermia when his total motility (PR + NP) is less than 40% or when his PR is below 32%. For the sperm to get through the cervical mucus to fertilize a woman's egg, they need to have progressive motility of at least 25 micrometers a second.³ Causes of complete asthenozoospermia include metabolic deficiencies, ultrastructural abnormalities of the sperm flagellum and necrozoospermia.

The subject of *shukra* and *shukra dushti* are the matter of discussion not only in the present days. It has been comprehensively discussed even in Vedic period. The main contributing factor for male reproduction is considered as *shukra*. In Ayurveda, almost all seminal anomalies are included in *ashtashukra dushti*. In the present study, all cases have increased viscosity and low sperm motility. So Asthenozoospermia can be included under *Granthi shukra*. *Granthi shukra* is one among the *ashta shukra dushtis* mentioned in Ayurveda classics. Here the dosha

predominance is *Kaphavata*. A specific *samprapti* is not mentioned for *granthi shukra*. Impairment of *agni* and production of *ama* plays an important role in pathogenesis. Due to indulgence in *asatmya ahara* and *vihara* there is malfunctioning of *jatharagni* and leads to formation of *ama*. Thus, the formation of *ahararasa* is affected. Due to *agnimandhya*, *kapha* gets increased. This leads to vitiation of *rasadhatu* and finally *shukra dhatu*. Due to *nidanans* such as *vishamashana* (untimely food intake, excess or in low quantity), *samashana* (wholesome and unwholesome), intake of *katu*, *madhura*, *rooksha*, *amla*, *abhisyandi*, *guru*, *seetha bhojana*, *vegadharana*, *divasvapna* and psychological factors (*shoka*, *chinta*) leads to vitiation of *kapha* and *vata doshas*. Because of *shukra vegadharana*, the semen gets obstructed in its course by aggravated *vayu* thus making it *grathita*. *Kapha* plays a major role as there is an *asraya-asrayi bandha* between *shukra* and *kapha*. *Kapha* increases viscosity of *shukra* and may cause decreased motility. In *granthi shukra rooksha*, *khara guna* of *vata* and *picchila*, *ghana guna* of *kapha* are involved. Improper functioning of *vyana* and *apana vata* are responsible for all types of *shukra dushti*.⁴ *Samana* and *vyana vata* are important in the conversion of *sarvadaihika shukra* into *roopadravya*. The process of *shukra nishkramanam* is done by *apana vata* and *shukrapratipadana* is the function of *vyana vata*.⁵ Eventhough semen is ejaculated by the help of *apana vata*, the sperms have to travel through the cervix and uterus to reach fallopian tube where fertilization occurs and this movement is done by *vyana vata*. The energy for sperm movement is provided by *samana vata*. Any derangement occurring in *amashaya*, *koshta* etc leads to vitiation of *samana vata*. *Prana vata* gets vitiated due to *manasika nidanas* which ultimately causes vitiation of other *vata*. *Jatharagni* is located in between *amasaya* and *pakwasaya* concerned with the digestion of food. It has profound influence on *dhatvagnis*. Nutrients derived from food by action of *jatharagni* and *bhutagni* are again subjected to *paka* by the seven *dhatvagnis*. Thus, the health of *shukra* depends upon normalcy of *shukra dhatvagni* which relies on *jatharagni*. Improper functioning of *dhatvagni* mainly *rasa dhatvagni* occurs due to diminished *jatharagni* and results in formation of improperly metabolized *rasa dhatu*. This causes depletion of further *dhatu* and hence *shukra*. When *shukradharakala* covering *shukradhatvagni* is vitiated by *vata dosha*, it results in decreased motility of sperm. When vitiated by *kapha* there may be increase in quantity of *shukra* but is of poor quality i.e. decreased motility.

Granthi shukra is one among the *ashta shukradushti* mentioned in our classics. Here *dosha* predominance is *kaphavata*. Ayurveda give emphasis to the treatment of *shukradushti* with *balakara*, *dhatuvridhikara*, *shukrajanaka* and *shukrapravartaka* in terms of increasing sperm motility by using *vajeekarana dravya*. Proper assessment of *nidanans*, state of *dosha*, *dooshya*, *agni*, *srothas* should be made. Acharya Susruta mentions that *nidanaparivarjana* is the first line of treatment of any disease.⁶ *Samanyachikitsa* for *shukradosha* includes *snehana*, *svedana*, *vamana*, *virechana*, *nirooha basthi* and *anuvasana basthi* followed by *uttaravasthi*.⁷ In the treatment of *granthi shukra*, prime importance should be given to *agni* as *dhatwagnimandya* is one among the major causes of *shukradoshas*. Proper *vyayama*, *vyavaya*, *yathakala samsodhanam*, diet of *madhura* and *tiktha rasa* are included in the management of *shukradosha*.⁸

Among Panchakarmas, *Virechana* mainly aims at eliminating the vitiated *Pitha dosha*. Acharya Kasyapa-*Virechana* enhances the structural and functional capabilities of *shukra* (*Virechanena sudhyanthi....Beejam bhavathi karmukam*).⁹ *Shukra* is *Soumya*, ie *Jalamahabhuta* predominant. So in order to increase the *soumyata* one has to decrease the *agni tatva*. So that to remove the vitiated *pitha dosha*, *virechana* is administered. The active principles of *virechaka dravya* are *soma* and *prithvi* dominant, it increases the *soumya guna* of *sukra*. *Virechana* also eliminates the *srotorodha* and activate transformation of *Dhatu* through *dhatvagni vyapara*, hence *sudha sukra* is formed. *Virechana* may be responsible for rectifying *pithadhara kala*. According to Acharya Dalhana, *pithadhara kala* and *majjadhara kala* are same. Hence *majjadhara kala* may also be rectified through *virechana*, which will lead to formation of pure *majja dhatu* hence *Sudha sukra*. *Avipathi choorna* is the drug of choice for *virechana* as it is the most apt one in pacifying *pitha dosha*.

Varanadi kasaya is *kapha medohara* and it is helps in reducing inflammation and promotes cellular metabolism. *Aswagandharishta* is indicated in *Murcha*, *Apasmara*, *Sosha*, *Unmada*, *Apasmrithi*, *Mandagni*, *Vataroga* etc. It improves blood flow to the reproductive tissues, induce spermatogenesis. It is good for stress induced male infertility.¹⁰

Phalasarpi mentioned in *Guhyaroga Pratisedha Adhyaya* of *Ashtanga Hridaya Uttara sthanam*.¹¹ The individual drugs used for the preparation of *Phala sarpi* are *balya*, *brimhana*, *vrishya*, *rajoshukla doshahara* and also have antioxidant property. This formulation has been directly

indicated in male and female infertility. Majority of the drugs are having *ushna veerya such as manjishtha, kushta, tagara, vacha, haridra, daruharidra, dipyaka, hingu* and *vajigandha* which normalizes the vitiated *vata dosha*. Results show that *Phala sarpis* has profound action in increasing motility. *Usna veerya* may have an action in regulating sperm motility. Considering *vipaka* of the ingredients, majority are having *katu vipaka* such as *manjishtha, kushta, tagara, vacha, dvinisha, dipyaka, katurohini, hingu* and *vajigandha*. Most of the ingredients in *Phala sarpis* are having *kaphavata hara* property. Considering all above facts, it can be concluded that combined action of *rasa, guna, veerya* and *vipaka* of the ingredients imparts *agnideepana, sroto shodhana* and *vrishya* properties.

CONCLUSION

Infertility is an age-old burning problem, and still heating up with its flames more widened due to the modern life style. Our classics have depicted various aetiological causes for *shukra dushti*, the same are observed in the present study. Moreover, the modern life style worsens the condition. Irregular dietary habits, tobacco addiction, excessive indulgence in sex and stressful life adds as the triggering factors to the manifestation of the disease. Patients who follow *apthyahara viharas* are more prone to *granthi shukra*. Ayurvedic management of both *Sodhana* and *Samana chikitsa* was very effective in the management of *granthi shukradushti*.

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REFERENCES

1. Konar H.D C Dutta's Text Book of Obstetrics. 8th edition. New Delhi: New Central Book Agency (P) Ltd; 2016
2. Katole A, Saoji AV. Prevalence of Primary Infertility and its Associated Risk Factors in Urban Population of Central India: A Community-Based Cross-Sectional Study. Indian J Community Med. 2019 Oct-Dec;44(4):337-341. doi: 10.4103/ijcm.IJCM_7_19. Prevalence of Primary Infertility and its Associated Risk Factors in Urban Population of Central India: A Community-Based Cross-Sectional Study.
3. Ortega C, Verheyen G, Raick D, Camus M, Devroey P, Tournaye H. Absolute asthenozoospermia and ICSI: What are the options, 5th ed Human Reproduction Update, 2011, Chapter 17, p.684–692.
4. Srikanthamurthy KR. Trans. Illustrated Sushruta Samhita, reprinted. Nidana Sthana, Vol 1, Varanasi: Chaukhambha orientalia; 2008. pp.178.
5. Srikanthamurthy KR. Ashtanga Samgraha of Vagbhata, Sutra Sthana, Vol. 1, Varanasi: Chaukhambha Krishnadas Academy; 2012.
6. Srikanthamurthy KR. Trans. Illustrated Sushruta Samhita, reprinted. Uttara Sthana, Vol 3, Varanasi: Chaukhambha orientalia; 2008. pp.475.
7. Sharma R.K, Vaidya Bhagwan Dash. Charaka Samhita Chikitsa Sthana, Vol. 4, Varanasi: Chowkhamba Sanskrit series office; 2013. pp.965.
8. Ram Karan Sharma, Vaidya Bhagwan Dash. Charaka Samhita Sutra Sthana, Vol. 1, Varanasi: Chowkhamba Sanskrit series office; 2017. pp.224.
9. Tewari P.V, Kasyapa Samhita or vrddhajivakiya tantra, Chaukhambha visvabharati Varanasi, 2016.
10. Mahdi, Abbas Ali et al. “Withania somnifera Improves Semen Quality in Stress-Related Male Fertility.” Evidence-based complementary and alternative medicine : eCAM, vol. 2011 576962. 29 Sep. 2009
11. Murthy K.R. *Astanga Hridayam uthrasthana*. Choukamba Krishnadas Academy, Varanasi. Edition 9th. 2013

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Table 1

Total volume viscosity Liquefaction time Reaction	2 ml Highly viscous Above 60 Alkaline
Microscopic examination	
Total count	85 millions/cumm
Active motile	10%
Sluggish motile	35%
Non motile	55%
RBCs	0-1 / hpf
Pus cells	0-2 / hpf
Morphology	
Normal forms	70%
Abnormal	30%

Table no. 2

Medicines	Dose	Duration
<i>Avipathy churna</i>	25 gm with hot water	Every 2 weeks
<i>Varanadi kashaya</i>	15ml <i>kasaya</i> + 45ml luke warm water, before food	3 months
<i>Aswagandarishtha</i>	25ml-0-25ml afterfood	3 months
<i>Phalasarpi</i>	1 tsp bed time	3 months

The semen analysis taken after 3 months of treatment shows marked improvement in results. Semen analysis- 21/9/2019

(Table no 3)

Total volume	2ml
Viscosity	Normal
Liquefaction time	Above 30
Reaction	Alkaline
Microscopic examination	
Total count	70 million/cumm
Active motile	45%
Sluggish motile	15%
Non motile	10%
RBCs	0-1 / hpf
Pus cells	0-2 /hpf
Morphology	
Active forms	75%
Non active forms	25%