



Ayurvedic Management Of Oligoasthenozoospermia- A Case Study

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Abstract

Infertility is a problem of global proportions affecting on an average of 15 % couples world wide[1]. Of all infertility cases, about 45- 50% is due to male factor[2]. This article represents the case study of a couple with infertility for three and a half years, who attended the Out Patient Department (OPD) of Govt. Ayurveda college Hospital for Women & Children, Thiruvananthapuram. On evaluating the male partner, aged 36 years, semen analysis showed reduced sperm concentration and motility along with high viscosity and increased liquefaction time. According to Ayurveda, the patient was diagnosed as having *Ksheena* and *Granthi sukradushti*, with investigations showing evidence of Oligoasthenozoospermia. The treatment was done at OP level. The semen analysis was repeated after the completion of medication, and the semenogram showed significant improvement. The above results shows that the Ayurvedic treatment is effective for the condition, Oligoasthenozoospermia.

Keywords- Male infertility, Oligoasthenozoospermia, *Ksheenasukradushti*, *Granthisukradushti*

Introduction

Infertility is defined as the inability of a couple to conceive even after one year of unprotected intercourse. According to Acharya Charaka, “The man without offspring can be like a single tree without branches, fruits and with foul smell”. In India, nearly 45-50% of infertility is related to the reproductive anomalies or disorders in the male. The prevalence is 18.71 % for asthenozoospermia and 63.13% for asthenozoospermia associated with oligo or teratospermia[3].

Low sperm concentration or Oligozoospermia, decrease the chances to conceive naturally. For the natural conception there must be an adequate number of spermatozoa in the semen. 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 male infertility.

The motility of a spermatozoon is categorized as progressive motility (PR), non-progressive motility (NP) and 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 micrometres per second. Causes of complete asthenozoospermia include metabolic deficiencies, ultrastructural abnormalities of the sperm flagellum and necrozoospermia.

Oligozoospermia is a condition of suboptimal concentration of spermatozoa in the ejaculated semen to ensure successful fertilization of an ovum. In 2010 WHO has stated a lower reference point less than 15 million sperm per ml is termed as Oligozoospermia[4]. But according to International Classification of Disease

categorization (it comes under 2021 ICD 10 CM code N46.1) the sperm concentration less than 20 million per ml can be considered as Oligozoospermia.

Currently various assisted reproductive techniques (ART) are being used to achieve conception in such cases. Most of the ARTs being invasive and complicated, they fail to provide confirm results and put a heavy economic burden on the couples. This case study represents the possibilities of Ayurveda in treating such conditions in a more effective way without much economic burden. Here the male partner was treated with *sodhana chikitsa* followed by *samana chikitsa* for a period of 3 months and the semen analysis after the treatment turned out normal. The treatment was comparatively cost effective and took very little time to show the results.

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 W & C Hospital, Govt. Ayurveda college Thiruvananthapuram. The couple had not used any contraceptive measures during this period and had normal sexual intercourse in frequency of 1-2/ week. The male partner denied any history of sexual dysfunction with respect to erection, orgasm, or ejaculation. He also denied any relevant history of surgery, systemic disorders, infections, and exposure to radiation/chemicals. There was also no history of gonadotoxic medication. His partner, 30-year-old woman, was diagnosed with low AMH and low AFC count. Though she reported to have regular cycles, she is currently under ayurvedic treatment for low AMH.

On examination

Clinical examination revealed no physical and systemic abnormality. During scrotal examination, temperature was found normal and no swelling noticed. No signs of inflammation, ulceration or rashes on scrotum, testes or penis were found. Position and size of the testes was normal. Prostate was normal during the examination. Development of secondary sexual characters were found to be normal.

Assessment criteria

The patient was assessed based on semen analysis before and after the treatment. Details of the semen analysis carried out before the treatment is as follows. Semen analysis – 27/4/2022 (Table no 1)

Table:1

Parameters	Observations
Volume	2.5 ml
Colour	Grey white
Liquefaction time (minutes)	60
Viscosity	High
pH	8.0
Sperm Concentration (million/ml)	13.6
RBC Count	Occasional
Leucocyte count	-
Motility	P 10%, NP 35%, Immotile 55%
Morphology	Normal 55%, Head defect 30%, Tail defect 15%

Treatment

The patient was managed at OPD level. Initially *Virechana* was done with *Avipathy churna* then *Samana oushadhis* like *Guluchyadi kashaya*, for two weeks and *Vidaryadi kashaya*, *Ashtachurna* and *Kalyanaka ghritha* were given for a period of 3 months. *Virechana* with *Avipathy churna* was repeated every 2 weeks. [Table no. 2]. The semen analysis was repeated after 3 months and the report showed significant improvement.

Table: 2

Medicine	Dose	Duration
Ashta choorna	5 grm with Hot water	2 weeks
Guluchyadi Kashaya	48 ml Bd, before food	2 weeks
Avipathy choorna	20 grm with honey, morning	Once in 2 weeks
Vidaryadi Kashaya	48 ml Bd, before food	3 months
Kalyanaka ghritha	12 ml bd before food	3 months

Pathya

Patient was asked to take *Shalidhanya*, *Godhuma*, *Mamsa*, *Ksheera*, *Ghritha*, *Navnita*, *Kharjura*, *Amalaki phala*. Patient was advised to take proper *Nidra* at night, *Abhayanga*, *Snana* in lukewarm water, and *Vyayama*, *Vega adharana*.

Apathya

Patient was asked to avoid *Dadhi Sevan*, *Ati Katu- Tikta*, *Lavan Rasa Sevana*, *Sarshap Taila*, *Guru-Virudha ahara*, intake of Oily, fried, Spicy food, Fast food, Ice cream, Cold drink, Bread, Alcohol, soft drinks, Tobacco. Patient also asked to avoid *ati maithun*, *amaithun*, excessive exercise, Suppression of natural urges, intercourse during menstruation, Fasting, Stress, strain etc.

Results

The semen analysis taken after 3 months shows marked improvement in results. Semen analysis- 15/08/2022 (Table no 3)

Table: 3

Parameters	Observations
Volume	2.5 ml
Colour	Grey white
Liquefaction time (minutes)	30
Viscosity	Normal
pH	8.0
Sperm Concentration (million/ml)	60
RBC Count	-
Leucocyte count	-
Motility	P 35%, NP 20%, Immotile 45%
Morphology	Normal 75%, Head defect 10%, Tail defect 15%

Discussion

The main contributing factor for male reproduction is considered as *sukra*. In Ayurveda, almost all seminal anomalies are included in *ashtasukra dushti*. In the present study, the report shows increased viscosity, low sperm motility, and low sperm concentration. The asthenozoospermia can be included under *Granthisukra*, and the oligozoospermia can be considered as *Ksheen sukra*. *Ksheenasukra* and *Granthisukra* are included in *ashta sukra dushtis* mentioned in Ayurveda classics. Here the *dosha* predominance of *Grandhisukra* is *Kaphavata* and that of *Ksheenasukra* is *Vata Pitha*, indicates the vitiation of *tridoshas*.

Impairment of *agni* and production of *ama* plays an important role in pathogenesis. Due to indulgence in *asatmya ahara* and *vihara* which cause malfunctioning of *jatharagni* leading to formation of *ama*. Thus, the formation of *ahararasa* is affected. Due to *agnimandhya*, *kapha* gets increased. This lead to vitiation of *rasadhatu* and finally *sukra dhatu*.

In this patient *nidanas* 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 like *shoka*, *chinta* lead to vitiation of *tridoshas*.

Due to the increase of *Kapha* viscosity increases and *sukra* solidifies like *grandhi* and cause decreased motility. Increased *Kapha* block the *srothas* and leads to the vitiation of *Vata*. Increased *Vata* with already vitiated *Pitha* leads to *Ksheena sukra* and that causes the decrease in quantity and quality of *Sukra*. The *ushna theekshna guna* of *pitha* impair the spermatogenesis and leads to the oligozoospermia.

Rasa dhatu is formed by the action of *jatharagni* and again subjected to *paka* by the seven *dhatvagnis*. Thus, the formation of *sukra* depends upon normalcy of *sukra dhatvagni* which relies on *jatharagni*. Improper functioning of *dhatvagni* mainly *rasa dhatvagni* occurs due to impaired *jatharagni* and results in improperly metabolized *rasa dhatu*. This causes depletion of further *dhatu* and hence *sukra*.

Ayurveda details the treatment of *sukradushti*, with *balakara*, *sukrajanaka* and *sukrapravartaka dravyas*. The treatment for each patient can be decided only after the assessment of *nidanas*, state of *dosha*, *doosha*, *agni*, and *srothas*. *Samsodhana* (cleansing), *samsamana* (pacification), and *nidanaparivarjana* (abstinence of etiological factors) are the first line of treatment of any disease[5]. In the treatment of *granthi sukra* and *ksheena sukra*, prime importance should be given to *agni* and *sroto rodha*.

Virechana is the main elimination therapy for vitiated *Pitha dosha*. According to Acharya Kasyapa, *virechana* enhances the structural and functional capabilities of *sukra* (*VirechanenaBeejam bhavathi karmukam*)[6]. To remove the vitiated *pitha dosha*, *virechana* was administered. *Virechana* also unclogs the *srotorodha* and enhances the transformation of *dhatu*s, thus *sudha sukra* is formed. Here, *Avipathy choorna* was used for *virechana*.

Ashta choorna, described in *Ashtangahrudaya*, *Chikitsasthanam*, *Gulma chikitsa*, improves the *agni* and pacifies the *kapha dosha*.

Guluchyadi kashaya is the *Kashaya Kalpana* of *guluchyadi gana* in *Ashtangahrudaya*, *Suthrasthana*. Formulation is *pitha kapha* pacifying, and *agni krit*. By improving the *agni*, the formulation neutralises the *ama* and enhances the formation of *dhatu*.

Vidaryadi Kashaya is the *Kashaya* preparation of *Vidaryadi gana* in *Ashtangahrudaya*, *Suthrasthana*. *Vidaryadi gana* is *brimhana* and indicated for *Vata Pitha* predominant conditions. By preparing the *Kashaya Kalpana* with same *gana*, the combination may become *tridosha* pacifying.

Another drug prescribed for the patient was *Kalyanaka Ghritha*, mentioned in *Ashtangahrudayam Utharasthanam*, *Unmada prathishedham*. It is indicated in *arethasi*, *aprajasi* conditions. The indication *arethasi* can be taken as the *ksheena sukra*.

It can be concluded that *virechana*, the *sodhana karma* administered, eliminates the vitiated *pitha and kapha dosha*. The formulations such as *Guluchyadi Kashaya*, *Ashta choorna* are *deepana pachana* and *sroto visodhana*. *Vidaryadi Kashaya* and *Kalyanaka ghritha* are *brumhana*, *agnideepana*, and *sroto shodhana*. The combined action of formulations added with *sodhana karma* improved the sperm concentration, motility and viscosity of semen.

Conclusion

In the current era, due to the modern life style and food habits, the prevalence of infertility has increased both in male and female. Various aetiological factors are described in our classics for *sukra dushti* and the same was observed in the present case study. Moreover, the modern life style, irregular dietary habits, addiction to tobacco and alcohol, and stressful life has become the triggering factors for the manifestation of the disease. It can be concluded that the management of *Ksheenasukradushti* and *Grandhisukradushti* can be effectively done with Ayurveda.

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