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Case Report

A comprehensive Ayurvedic treatment along with counseling in oligoasthenozoospermia with previous intrauterine insemination failure-A case report



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ABSTRACT

Male infertility contributes for 50% of infertility globally, and several etiological factors contribute to it. Oligoasthenozoospermia and anxiety, forms a vicious cycle, resulting in male infertility. A man advised for assisted reproductive techniques, even after correcting seminal parameters has poor success rate if the symptoms of anxiety is left untreated. The signs and symptoms of oligoasthenozoospermia can be compared with *Kshina shukra* of Ayurvedic classics. The present case report presents, the role of an indigenous combination of drugs in improving the quantity and quality of semen, along with the reduction in anxiety levels through counseling. The patient with low sperm motility and volume was subjected to Ayurvedic management protocol of initially Counseling, followed by *Shodhana* treatment and then administration of *Mashadi choornam* for 90 days. A marked improvement was observed in seminal parameters and anxiety levels and patient could undergo natural conception, a few months after the treatment, thus focusing on an integrative approach.

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1. Introduction

The inability to conceive is encountered as a stressful condition by couples around the world. The consequences of infertility are multitudinous and can include societal backlash and personal suffering [1]. According to a recent report on the status of infertility in India, nearly 50% of infertility is related to the reproductive anomalies or disorders in the male [2]. With the development of Assisted Reproductive Techniques (ART), such as Intra Uterine Insemination (IUI) and Intra-Cytoplasmic Sperm Injection (ICSI) severe male factor infertility, such as oligoasthenozoospermia can be treated [3]. Men experience infertility as a sign of compromised potency and sexual adequacy, resulting in anxiety [4]. The term “anxiety” describes a broad spectrum of symptoms relating to psychological, autonomic and somatic domains affecting multiple systems in the body [5]. Symptoms of anxiety can lower the secretion of Sex Hormone Binding Globulin (SHBG) and

Dehydroepiandrosterone Sulphate (DHEA-S), increase the secretion of cortisol and prolactin and increase serum levels of Follicle stimulating Hormone (FSH) and Luteinizing Hormone (LH). It results in decreased semen volume and sperm density [6,7]. Variation in seminal parameters and anxiety forms a vicious cycle, and thus its assessment becomes ineluctable criteria for attaining conception, even in the case of in vitro Fertilization (IVF). The case of this report is a 34-year-old married, non-smoking, non-alcoholic male with primary infertility since 7 years of married life, undergoing continuous interventions and repeated IUI. Evaluations of seminal parameters on comparing with the normal, revealed Oligoasthenozoospermia [8]. The clinical symptoms identified in the present case report correlates to *Kshina shukra* (reduced motility and count of sperm), comprehended in Ayurvedic classics. In the present case report, the role of an indigenous combination of drugs in improving the quantity and quality of semen, along with the reduction in anxiety levels through counseling was observed, reflecting an integrative approach.

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2. Patient information

The patient got married in the year 2010, at the age of 26. Investigations carried out on both partners after 2 years of married life, revealed Oligoasthenozoospermia. After correcting the sperm count with oral medications, two cycles of IUI was done in 2016 which was unsuccessful [Table 1]. Due to stress of seminal abnormality and failed IUIs, he was suffering from symptoms of anxiety, mainly insomnia, depressed mood and tension. Evaluation with Hamilton Anxiety Rating Scale [5] revealed anxiety of moderate severity. Gradually, his seminal parameters worsened and he was advised to continue his oral medications and then to undergo ICSI with his partner's ovum. They visited our outpatient department (OPD) on 14/9/2017 in the hope of natural conception with Ayurvedic treatment. He had no any major illness in past. Family history was negative for any tuberculosis. His personal history revealed a sedentary lifestyle. He has regular bowel habit and appetite was reduced. His tongue was uncoated and had broken sleep. On examination, he was having a feeling of weakness and irritability. His blood pressure was 110/80 mmHg, pulse rate 74/min and body mass index 26.11 kg/m². He is of *vata pitta prakriti* with *Avara Satva* (moderate mental strength) and *Madhyama Koshta* (moderate bowel). Patient provided a written permission/informed consent for the publication of this case report.

3. Clinical findings

The physical examination and examination of external genitalia did not reveal any abnormal findings. Latest report of semen analysis showed 89% non motile sperm in a total of 3 million/ml counts, though his semen quantity was sufficient.

4. Diagnostic assessment

In the view of symptoms, the present case was diagnosed as *Kshina shukra* (Oligoasthenozoospermia), associated with anxiety. The assessment was done by comparing baseline seminal parameters with repeated evaluation after 3 months of administration of initially Counseling, followed by *Shodhana* treatment (purification therapy) and then continuing with *Mashadi choornam* (oral medication). Baseline seminal parameters includes sperm count of 3 million/ml (reference range: ≥ 15 million/ml) and total motility of 11% (reference range: $> 40\%$). Evaluation with Hamilton Anxiety Rating Scale revealed anxiety of moderate severity scoring with score of 23.

5. Therapeutic intervention

The therapeutic plan was to begin with counseling. The focus on the patient's psychosocial and emotional needs was considered in counseling by understanding childlessness, implications counseling, support counseling and/or therapeutic counseling [9]. The need of lifestyle modifications were also incorporated in counseling, such as inclusion of exercises in daily routine, along with yoga and a healthy diet. Exercises starting with a minimum of three

times a week for 30–45 min were advised. It included a combination of aerobic exercise like jogging and resistance training with workout of major muscles in his body. Then administration of *Shodhana chikitsa* (purification therapy) followed by *Shamana Chikitsa* (oral medication) was done. Initially, his *Agni* was improved by *Dipana-Pachana* (improving digestion) with *Vaishvanara Choorna* as a *Purvakarma* (preparation) of *Shodhana*. He attained *Nirama Lakshana* (signs of digestion of *Ama*) by 2 days; *Accha Snehapana* (intake of oil) was started with *Sukumara Ghrta*. *Samyak Snigdha Laksana* (signs of proper oleation) was observed after 6 days of *Snehapana*. *Sarvanga Abhyanga* (Body Massage) was done with *Dhanwanthara Taila* for 2 days followed by *Mridu Virechana* (mild purgation) with the administration of *Gandharvahastadi eranda* 20 mL. After completion of *Shodhana* therapy, he was discharged from the hospital. After *Virechana*, he was subjected to *Shamana Chikitsa* for 3 months with *M.ashadi choornam* (medicated powder). Patient was advised to intake 6 gm of *choorna* twice daily before food with *sitha* (sugar) as *prakshepa* [Table 2].

6. Follow up and outcomes

After 3 months, the patient was advised to have a follow-up in the OPD with a reassessment of Semenogram and Hamilton Anxiety Rating Scale. Hamilton Anxiety Rating scale showed reduction in the anxiety rating from 23 (moderate severity) before treatment to 4 (mild severity) after treatment. It was observed that there was a marked improvement in the seminal parameters.

The progressive motility was increased from 5% to 56%, non-progressive motility was reduced from 6% to 3%, immotile sperm was reduced from 89% to 31%. Sperm concentration was increased from 3 million/ml to 32 million/ml. Normal morphology was attained in 80%. Head defects were reduced from 6% to 4%, tail defects were reduced from 5% to 2%. The Volume (2.5 ml), colour and appearance (Grey white), pH (7.3) liquefaction time and viscosity were within normal range.

7. Discussion

With the increase in rate of infertility, significant developments and novel technologies have been incorporated in its treatment. Assisted reproductive technologies (ARTs), the most recommended treatment in infertility, include a wide range of procedures involving in vitro fertilization (IVF) and its extended technologies, such as intracytoplasmic sperm injection (ICSI), pre-implantation genetic diagnosis (PGD), and cryotechnology [10]. Studies reveal that stress and anxiety can result in reproductive failure [11]. Lack of awareness regarding the importance of an integrated approach to medical intervention to balance body and mind has grown up as a great challenge to the physicians as well as patients. The present case report correlates to clinical symptoms of *Kshina shukra* [12] associated with anxiety. Counseling includes caring for the emotional needs of the patient demands continuity and should not be treated as a single event [9]. The case has *vata-pitta dosha vikriti* (alteration of *Dosha*) resulting in *Kshina shukra*, that are pronounced through the *lakshanas* of patient. Oral administration of *Vaishvanara Choorna* having *Dipana* and *Pachana* properties helps in *Agni Vardhana* (enhancing digestive fire), also balances the *Dhatu Parinama* (transformation of *Dhatu*) [13, verse 86]. *Sukumara ghrta* includes *dasamoola* (a group of 10 drugs) as the *kashaya dravya* [13, verse 131]. The ingredients are mainly of *madhura rasa*, *madhura vipaka* and *snigdha guna* and act as *kapha-vata shamaka*, *anulomana* (carminative) and *srotorodha nivarana* (remove blockage of channels). The treatment protocol includes *Koshta shuddhi* through *Mridu Virechana* followed by *Shamana Chikitsa* using *brimhana* (-nourishing), *bala-varhdhana* (promotes strength) and *tarpana*

Table 1
Timeline of medical history.

Year	Clinical events and interventions
2012	Diagnosed as oligoasthenozoospermia
2016	Underwent 2 IUI failures
July 2017	Suggested ICSI with partner's ovum
14/9/2017	Started taking Ayurvedic treatment

IUI- Intra Uterine Insemination, ICSI- Intracytoplasmic Sperm Injection.

Table 2
Treatment protocol.

Treatment procedure	Method of administration	Treatment Duration
Counseling	Support counseling and therapeutic counseling	Day 1
Dipana-Pachana with Vaishavanara Choorna	10 gm twice daily before food with warm water	Day 2–3
Snehapana with Sukumara Ghrta	Arohana karma after assessing the Agni and Koshtha	Day 4–9
Snehana and Swedana	Sarvanga Abhyanga with Dhanwanthara Taila	Day 10–12
Mridu Virechana with Gandharvahastadi eranda	20 mL given at 7 am	Day 12
Mashadi choornam	6 gm twice daily before food with sitha as prakshepa	Day 14–105

dravyas (nourishing substances) to attain *dhatu samyata*. *Virechana* helps in attaining *Agni Dipti* and *SrotoVishudhi* (purification of channels) and hence supports the proper *Dhatu Parinama* [14]. *Mashadi choornam* is a *vajeekarana yoga* (aphrodisiac) explained under *choorna prakarana*, that includes a combination of six drugs namely- *Masha* (*Phaseolus mungo*), *yashtimadhu* (*Glycyrrhiza glabra*), *svadamshttra* (*Tribulus terrestris*), *asvagandha* (*Withania somnifera*), *pakvaramaphala* (*Musa paradasiaca*), *mudga* (*Vigna radiate*). [13, verse 65] The ingredients are mainly of *Madhura rasa*, *Guru snigdha guna*, *Sheeta virya* and *madhura vipaka*. Oral administration of *Mashadi choornam* having *brimhana* (replenishing), *vrishtya* (aphrodisiac), *rasayana* (rejuvenation), *sukrala* (spermatogenetic) helps in improvement of *Kshina shukra* through *Dhatupusti*, thus creating a satisfactory improvement in the seminal parameters. Notable improvement in the symptoms of *Kshina shukra* was observed after the treatment procedure. This protocol could improve the quality and quantity of semen by increasing sperm motility and concentration and by reducing sperm morphological defects. This integrative intervention also maintained the thickness and consistency of semen which might also be helpful in improving the viability and motility of sperms. The seminal parameters after the treatment were considerably improved on a much satisfactory level, so that the patient to undergo natural conception, a few months after the treatment.

8. Conclusion

This Ayurvedic treatment protocol including a combination of both *Shodhana* and *Shamana* therapies along with counseling were helpful in improving the seminal parameters to a satisfactory level and in reducing the anxiety levels. Hence, this was helpful for the patient to undergo natural conception, a few months after the treatment. Therefore, this approach can be considered in patients with low sperm count and motility when associated with anxiety. In patient perspective, the patient was satisfied with the treatment as he had considerable improvement in the sperm count and motility values, and reduction in the anxiety levels that made him to undergo natural conception.

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Conflict of Interest

None.

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