VOLUME-8, ISSUE-6, JUNE-2019 • PRINT ISSN No. 2277 - 8160

Original Research Paper

Ayurveda

STUDY ON EFFECTIVENESS OF AYURVEDIC TREATMENT IN IDIOPATHIC AZOOSPERMIA, OLIGOSPERMIA AND ASTHENOSPERMIA

Dr. Narendra Nandkishor Borate* BAMS, Ayurvedic Consultant, Sanskruti Clinic,Shop no. 10-A, Samarth Complex, Gulab Nagar, Dhankawadi, Pune-411043 *Corresponding Author

ABSTRACT

BACKGROUND: Infertility have become one of the major problems in reproductive health all over the world. Male infertility contributing factor in one third of the couples. Treatment based on Ayurvedic principles may be beneficial in male infertility.

AIM: To study the effectiveness of Ayurvedic treatment in idiopathic azoospermia, oligospermia and asthenospermia

METHODOLOGY: A record based before and after study was carried out at private Ayurveda center of Pune city India. Randomly medical records of Male patients with idiopathic azoospermia, oligospermia and asthenospermia were included in the study. Semen parameters were compared before and after completion of the treatment. Statistical analysis: Mean, standard deviation, percentage and proportions were used for descriptive statistics, paired t test and z test were used as a test of significance.

RESULTS: Medical records of the total 50 patients of Male patients with idiopathic azoospermia, oligospermia and asthenospermia were included in the study. Mean age of the patients was 31.3 years (S.D.=5.4 years). Mean duration of the treatment was 3.4 months (SD=2.7 months). Improvement in the mean sperm count, sperm motility was statistically significant (p= 0.01). Mean total sperm count was improved from 3.39 million to 25.40 million. Sperm motility of Grade III and Grade IV sperms was improved from only 8.79% to 31.77%.

CONCLUSION AND RECOMMENDATION: Treatment based on Ayurvedic principles was found to be effective in male infertility patients with idiopathic azoospermia and oligospermia in improving sperm count and sperm motility. Larger and more rigorous studies are recommended.

KEYWORDS : Ayurvedic Treatment, Effectiveness, Idiopathic Azoospermia, Oligospermia, Asthenospermia

INTRODUCTION:

As per World Health Organization (WHO) Infertility is "a disease of the reproductive system defined by the failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse." Despite the high burden, couples and individuals, who desire but are unable to achieve and maintain a desired pregnancy, have needs which are not being addressed, especially in lower resource settings worldwide. Yet, the field of reproductive medicine and endocrinology is rapidly growing, with success stories that have resolved infertility and fertility problems – from the most simple fertility awareness methods to more advanced innovations. Infertility and subfertility affect a significant proportion of humanity. WHO has calculated that over 10% of women are inflicted – women who have tried unsuccessfully, and have remained in a stable relationship for five years or more. Estimates in women using a two year time frame, result in prevalence values 2.5 times larger. The burden in men is unknown. The overall burden of subfertility/infertility is significant, likely underestimated, and has not displayed any decrease over the last 20 years (1).

In over a one third of couples, male infertility plays a role. Male infertility is due to low sperm production, abnormal sperm function or blockages that prevent the delivery of sperm. Illnesses, injuries, chronic health problems, lifestyle choices and other factors can play a role in causing male infertility. Not being able to conceive a child can be stressful and frustrating, but a number of male infertility treatments are available (2).

A complete lack of sperm occurs in about 10% to 15% of men who are infertile. A hormone imbalance or blockage of sperm movement can cause a lack of sperm. In some cases of infertility, a man produces less sperm than normal. The most common cause of this condition is varicocele, an enlarged vein in the testicle. Varicocele is present in about 40% of men with infertility problems (3)

Azoospermia may occur because of reproductive tract obstruction or inadequate production of spermatozoa, such that spermatozoa do not appear in the ejaculate. A reduced sperm density is known as oligozoospermia is often accompanied by poor motility and morphology reflecting qualitative and quantitative defects in spermatogenesis. Many reproductive and nonreproductive disorders and treatments may be responsible, but most cases remain unexplained (idiopathic) (4).

The diagnosis of Oligospermia is based on one low count in a semen analysis performed at on two occasions. As per WHO less than 15 million sperm/ml is called as Oligospermia Asthenozoospermia (AS) is a common cause of human male infertility characterized by reduced sperm motility; that is, less than 40%. The molecular mechanism behind this impairment is not fully understood in the majority of cases (5)

Ayurveda is an Indian system of medicine with historical roots in the ancient Vedas. In countries beyond India, Ayurvedic therapies and practices have been integrated in general wellness applications and in some cases in medical use.

In Ayurveda, healthy semen which is more fertile is described as

"shukram shuklam guru snigdham madhuram bahalam bahu|
ghritamaakshikatailabham sadgarbhaya||"

This means the semen which is white, heavy, sticky, sweet in taste, more in quantity and which may look like the color of ghee or honey or oil is always fertile.

Vajikarana or Vrishya chikitsa is a one of eight major specialty of the Ashtanga Ayurveda. This subject is concerned with aphrodisiacs, virility and improving health of progeny. As per Charak Samhita, by proper use of these formulations, one becomes endowed with good physique, potency, strength, and complexion and sexually exhilarated and sexually potent. This in turn is helpful in many common sexual dysfunctions, including Infertility, Premature Ejaculation and Erectile dysfunction (6).

As treatment options for azoospermia, oligospermia and asthenospermia are limited in most the systems of the

Medicine, we carried out the study based on the treatment of Ayurvedic principles among the males with azoospermia, oligospermia and asthenospermia . Aim of the study was to compare effectiveness of the treatment in improving semen quantity and quality.

METHODOLOGY:

A record based before and after study was carried out in Private Ayurveda Center in Pune city which is specialized in treatment of male infertility.

Medical Records of Semem analysis of the patients done in the accredited laboratory were randomly selected from patients with infertility problem due to idiopathics azoospermia, oligospermia asthenospermia based on World Health Organization *guidelines*.

Treatment based on the Ayurvedic Principles were given to the patients for the specific duration. After completion of the treatment Semen analysis was carried out in the accredited laboratory. Various semen parameters such as sperm count for azoospermia and oligospermia and sperm motility for asthenospermia were compared before and after the treatment.

Statistical Analysis:

Data was collected using a structured proforma on Excel software (Microsoft, Seattle, USA). Data was analysed by using statistical software Primer of Biostatistics. Measurements were expressed as means and standard deviations for continuous variables and percentages for categorical variables and was analysed. Paired T Test and Z test were used as test of significance in the inferential statistics. P value less than 0.05 was considered statistically significant.

Ethical considerations:

The study was conducted according to the Declaration of Helsinki; the protocol was reviewed and approved by the institutional ethics committee. A written informed consent was taken from all patients after explaining the procedure.

RESULTS:

Total 50 patients were included in the study who were fulfilling the inclusion criteria.

Mean age of the patients was 31.3 years (S.D.=5.4 years). Age group of the patients was ranging from 31 years to 43 years.

Mean treatment period based of Ayurvedic principles was 3.4 months (SD=2.7 months).

Table No. 1: Comparison of Semen Parameters

Sr. No.	Semen Parameters	Mean Before Treatment	Mean After Treatment	P value; statistical significance
1.	Sperm count	3.29 million	25.40 million	< 0.01, H.S.
2.	Sperm motility	Percentage Before Treatment	Percentage After Treatment	P value; statistical significance
	Grade III & IV	8.79 %	31.77%	<0.01;HS

* H.S= Highly Significant

There was statistically significant improvement in the mean total sperm count from 3.39 million to 25.40 million. ($p<0.01$) as well as improvement in the sperm motility of Grade III and Grade IV from only 8.79% to 31.77% ($p<0.01$).

DISCUSSION:

The inability to conceive a child is most often viewed as a private matter, but public health perspectives and skills can contribute greatly to our knowledge about infertility, and the development of effective and rational public policy for prevention, access to health care, and regulation of new technologies (7).

Infertility affects an estimated 15% of couples globally, amounting to 48.5 million couples. Males are found to be solely responsible for 20-30% of infertility cases and contribute to 50% of cases overall. However, this number does not accurately represent all regions of the world. Indeed, on a global level, there is a lack of accurate statistics on rates of male infertility (8).

Ayurvedic medicine deals with infertility by detoxification and *dosha* cleansing. It prescribes herbs to reduce stress, build immunity, and rejuvenate the core tissues and *dhatus*. Such deep nourishment helps the body make healthy and vital sperm (9).

The formation of Shukra Dhatu depends on a long chain of metabolic processes starting from digestion, assimilation leading to creation of blood, muscle, fat, bone, bone marrow and lastly the Shukra tissue. The health of this tissue is affected by the well-being of other body tissues.When it doesn't get optimum nutrition due to factors like an unhealthy life style, eating junk food, poor digestion that create toxins in the body which affect the reproductive system.

In the present study we applied Ayurvedic principle to the male patients with problem of infertility mainly due to azoospermia or oligospermia. We found that after completion of the proper treatment based on Ayurvedic principles there was statistically significant improvement in most of the semen parameters such as total sperm count, sperm motility.

CONCLUSION AND RECOMMENDATION:

To conclude, present study showed that treatment based on Ayurvedic principles was found to be effective in male infertility patients with idiopathic azoospermia and oligospermia in improving sperm count and sperm motility. We recommend larger and more rigorous studies such as randomised control trials to get more conclusive results.

REFERENCES:

1. Infertlity, health topics as available from, https://www.who.int/reproductivehealth/topics/infertility/perspective/en/
2. Male infertilty. As available from, https://www.mayoclinic.org/diseases-conditions/male-infertility/symptoms-causes/syc-20374773
3. How common is male infertility, and what are its causes? As available from, https://www.nichd.nih.gov/health/topics/menshealth/conditioninfo/infertility
4. Robert I. McLachlan, Approach to the Patient With Oligozoospermia. The Journal of Clinical Endocrinology, 2013;98(3):873-880 https://doi.org/10.1210/jc.2012-3650
5. Asthenospermia. As available from, https://www.sciencedirect.com/topics/medicine-and-dentistry/asthenospermia
6. Dalal PK, Tripathi A, Gupta SK. Vajikarana: Treatment of sexual dysfunctions based on Indian concepts. Indian J Psychiatry. 2013;55(Suppl 2):S273–S276. Doi:10.4103/0019-5545.105550
7. Fidler AT, Bernstein J. Infertility: from a personal to a public health problem. Public Health Rep. 1999;114(6):494–511.
8. Agarwal A, Mulgund A, Hamada A, Chyatte MR. A unique view on male infertility around the globe. Reprod Biol Endocrinol. 2015;13:37. Published 2015 Apr 26. doi:10.1186/s12958-015-0032-1
9. Shikha Sharma.Ayurveda and male infertility. As available from, https://www.hindustantimes.com/brunch/ayurveda-and-male-infertility/story-2CJZ63pQ6CNe8FQuAPOUcK.html