A STUDY TO EVALUATE EFFECT OF YASHAD BHASM IN OLIGOSPERMIA

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ABSTRACT

According to Rasashastra, the roles of metals in human physiology are well established. It is also known by modern knowledge that many metals are required in trace amounts for normal metabolism and their deficiency leads to diseases. In Ayurveda, metal-based preparations, that is, bhasmas, are indicated for the treatment of several diseases. Bhasma is a calcinated preparation in which the gem or metal is converted into ash. Yashada bhasma is well characterized mineral used in traditional medicine for the treatment of various disorders. Oligospermia is a male fertility issue defined as a low sperm concentration in the ejaculate. As defined by the World Health Organization (WHO) in 1999, a low sperm count is less than 20 million sperms/ml is considered as Oligospermia. Objective: The purpose of this study is to evaluate the efficacy of Yashad bhasm in different aspects of oligospermia compared to Placebo (Substance That is not known to have treatment effect). Methods: Yashada bhasma, a Zinc based Ayurvedic metallic preparation, was prepared as per Rasa tarangini, transformed into bio-absorbable bhasma form and also to know its effect on patients of oligospermia. 42 patients selected for clinical trial. Trial was divided into two groups one for Yashad bhasm and second for placebo. Result: group A patients had shown improvement in 92.3% in comparison to group B which showed improvement in only 0.27%. Conclusion: Use of Yashad bhasm in oligospermia is very quick and effective treatment without any side effects as compare to other medicine.
INTRODUCTION

According to Ayurvedic treatises, Seven dhatus (body tissues) of the body are very much effected by metals as gold, silver, copper, iron, tin, lead and zinc etc. Lot of them has been proved as essential elements for the body. Modern science also accepts that perfect health is attributed to the state of equilibrium of these elements in body tissues. Any imbalance, excess or deficiency-disturbs the human physiology function. Every mineral or metal in its native form is not acceptable by human body. It is necessary to convert their toxic nature into medicinal properties. Ayurveda has a way “BHASMIKARN” (SHODHAN +MARAN) for converting the minerals into a biologically acceptable form, which can be easily assimilated into the body. YASHAD bhasma is specially processed zinc and zinc deficient diets show anorexia, weight loss, growth retardation, various skin dystrophies and impaired glucose metabolism.

Oligospermia is also known as a low sperm count or oligozoospermia. In oligozoospermia there are fewer sperm cells in the ejaculate than normal. Oligospermia is generally defined as less than 20 million spermatozoa per one ml of ejaculate. Oligospermia is one of the main causes of male infertility or sub-fertility. Sub-fertility is a reduced ability to achieve a pregnancy while infertility is defined as the complete inability to produce a pregnancy after about one year of unprotected sexual activity.

Oligospermia can be the result of many factors, some are permanent and some are reversible. Causes of oligospermia include an obstruction of the normal flow of sperm due to such conditions as testicular trauma and vasectomy. Oligospermia may also result from scarring due to surgery on the male reproductive system or from infection and sexually transmitted diseases.

Commonest Causes Of Oligospermia Are Stress Reduces Sperm Count, Tobacco Nicotine damages sperms and Lead Workers in printing press have low sperm count, Hot climates, Varicocele- dilated vein in scrotum reduces sperm count, excessive uses of saunas, hot baths, the wearing of tight underwear, and other situations in which scrotal temperature may be raised, Alcohol: Alcohol damages sperms.

MATERIAL AND METHOD

According to RASA TARANGINI for the preparation of Yashad Bhasm, first of all Yashad was subjected to Dhalana (process where molten metal is poured into liquids), Jaran (roasting
purified Yashad with Apamarg Panchang), Maran (triturated with juice of Aloe vera and heated in the furnace). For process of SHODHAN (purification) of Yashad, it was poured into CHURNODAKA (lime water) for seven times. Purified zinc pieces were made into fine powder by grinding it. This grinded zinc is melted in an Iron vessel and mixed with powder of APAMARGA (Achyranthus aspera). The powder and melted zinc was grounded well in vessel. Disc shaped cake of this mixture was prepared with the help of Aloe vera juice. These disc shaped cakes were put in furnace at 800-900°C for 4-5 hours. This process of mixing Aloe vera and heating in furnace is repeated for seven times. In last turn we obtained light yellow colored Yashad bhasm. This Yashad Bhasm is given to patients of oligospermia in doses of 125mg twice in a day with honey. All the patients are selected on OPD basis in a private clinic Atrey Ayurvedic chikitsalye, Bareilly from June 2013 to June 2014 and all the reports are performed in Standard diagnostic lab.

FOR SELECTION OF PATIENTS

Primary Measures: Sperm density in infertile men with documented oligospermia.
Secondary Measures: Total sperm count, total motile sperm count, sperm morphology.

Semen Analysis
The basic test to evaluate a men's fertility is a semen analysis. To perform this test, patients were indicated to collect their sample of semen in a collection jar during masturbation either at home or at the laboratory. Patients were also indicated to abstain from ejaculation for four days before the test, because each ejaculation can reduce the number of sperms. A semen analysis is repeated at least three times over three months to analyze any abnormalities in sperm count, motility and morphology, as well as any problem in the semen.

Sperm Count
A low sperm count should not be viewed as a definitive diagnosis of infertility but rather as an indicator of a fertility problem. Count of less than 20 million per milliliter was considered strong indicator of infertility, although pregnancy is sometimes possible even with such low counts.

Sperm Motility
Motility is the speed and quality of movement. It was graded on a 1 to 4 ranking system.
* Grade 1 -Sperm wriggles sluggishly and makes little forward progress.
* Grade 2- Sperm moves forward, but are either very slow or does not move in a straight line.
* Grade 3 - Sperm moves in a straight line at a reasonable speed and can home on an egg accurately.

* Grade 4 - Sperm is as accurate as Grade 3 sperm, but moves at terrific speed. Sperms that clump together may indicate that antibodies to the sperm are present.

**Sperm Morphology**

Morphology is the structure of the sperm. About 60% of the sperm should be normal in size and shape for adequate fertility. Determining the morphology of the sperm is particularly important for the success of the fertility treatment.

**Exclusion Criteria**

1. Patients that were currently taking thiazide, cyclosporin, lithium, and allopurinol or the use of these medications in the last 2 weeks.
2. The frequent use of NSAIDS (3 or more times a week).
3. Patients of trauma and vasectomy.
4. Regular use of tobacco products.
5. Mean white blood cell count >1 million/ml in the ejaculate.
6. Inability or unwillingness to participate in evaluations required by the study.
7. Sexually transmitted disease is present
8. Effecting from any malignant conditions and varicocele
9. Taking Radiation Treatment: Over-exposure to radiation & X-rays affect any rapidly dividing cell, so cells that produce sperm are quite sensitive to radiation damage

**Study**

Two groups of 21 patients each were formed. Patients treated with Yashad bhasm are put in **GROUP A** and patients treated with Palcebo are put in **GROUP B**. Total duration of therapy was of 6 weeks. Semen analysis was done for following three months and thrice in a month to study any change in sperm density, sperm count, sperm motility and sperm morphology. Sperm Count in **GROUP A** patients shows S.D. 0.52, ‘t’ value 9.56 and ‘p’ value is <0.001 which are highly significant results. Sperm Motility S.D. 0.67, ‘t’ value 10.00 and ‘p’ value <0.001 and its again highly significant. Sperm Morphology S.D.0.61, ‘t’ value 5.71 and ‘p’ value <0.001 showing high significance. These all data’s are suggesting highly significant results in all the three parameters. Sperm Count in **GROUP B** patients shows S.D. 416, ‘t’ value 1.24 and ‘p’ value is <0.1 which is non significant results. Sperm Motility S.D. 325, ‘t’ value 0.51 and ‘p’ value <0.1 showing non significant results. Sperm Morphology S.D.713, ‘t’
value 0.77 and ‘p’ value <0.1 and its again non significant results. These, all three data are suggesting non significant results. In GROUP A relief was 92.3% in comparison to GROUP B which shows relief in 0.27%.

CONCLUSION
1. YASHAD BHASM is effective in 92.3% in sperm abnormalities i.e. Low Sperm count, Low Motility, Abnormal Sperm Cell Morphology.
2. It is the fastest among all treatment. It raises sperm count four to six fold in one month treatment and move so on until desired results are achieved.
3. The lowest count which can be helped is 4 lac per ml or 0.4 million per ml. below, this the result may be variable. * It does not support azoospermia or zero count at all. * It improves not only sperm count but also it’s quality. It raises low sperm motility to high sperm motility. It also improves grades of sperm motility simultaneously.
4. The greatest advantage is that even after stopping the treatment the higher count remains longer, where as in male hormones, it falls as soon as the treatment is stopped.

REFERENCES
6. L. Rink and H. Kirchner, “Zinc-altered immune function and cytokine production,” Journal of Nutrition, 2000;130(5): 1407S–1411S,