



EFFECT OF AYURVEDIC MEDICINES “SUVARNA BHASMA” (GOLD ASH) AND “ATMAGUPTA CHURNA” IN NORMOZOOSPERMIC INFERTILE PATIENTS

Ayurveda

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ABSTRACT

In Ayurveda several drugs are available for the treatment of male infertility. Aim of this study was to understand the effect of Suvarna Bhasma and to compare with that of Atmagupta Churna in infertile normozoospermic men. A total number of forty normozoospermic infertile patients were selected and included in this study. They were divided into two groups of twenty each. In one group Suvarna Bhasma (SB) and in second group Atmagupta Churna (AC) were advised for one month period. Results of semen study showed improvement in both groups. It was much better in SB group where the improvement in semen parameters continued for longer period of time.

KEYWORDS

Male infertility, Ayurveda, Suvarna Bhasma, Atmagupta Churna, Sperm count, Sperm Motility.

INTRODUCTION

Infertility of a couple affects them psychologically and socially. When an infertile couple reports to a clinician for the treatment of their childlessness possible responsible causes for infertility are searched in both partners. Husband, Wife or both may be responsible for infertility. After proper investigations treatment is advised either to husband or wife or both depending on the involvement of partners.

Male infertility is on rise (Biradar 2017; Chaitrali et al. 2019; Mehra 2018; Skandhan, Mazumdar 1982 a ; Skandhan et al. 1986). Semen evaluation is the foremost diagnostic tool in male. A minimum level of important semen parameters required for male fertility (WHO 1992).

Several reasons are known for male infertility and accordingly treatment is advised by a clinician. In Ayurveda, the oldest Systematic Medical Practice originated in India, the treatment for male infertility are several. In this study we compared the effect of two important Ayurveda Medicines on semen production.

MATERIALS AND METHODS

The proposal of this study was approved by the Institutional Ethical Committee.

A total number of 40 normozoospermic infertile patients selected for this study were who reported to outpatient department of the Institute for Post Graduate Studies in Ayurveda and Research, Gujarat Ayurved University, for the treatment of childlessness. Their age was from 22 to 34 years. Their married life was from 2 to 10 years.

Patients were divided into 2 groups and the details of treatment is given below.

Group	Number of Patients	Drug	Dosage	Total Days
1	20	Atmagupta Churna (AC)	3mg twice a day	30
2	20	Suvarna Bhasma (SB)	4mg twice a day	30

Before, during and after the treatment the semen samples were studied. AC is a well accepted medicine for the treatment of infertility (Kushawaha 2009). After the completion of the treatment monthly once for three more months semen samples were examined. Results of SB is compared to that of AC.

Collection of semen sample was done after maintaining an abstinence of 3 – 5 days (Skandhan et al. 1985). Collection was done in a room

allotted close to laboratory. Sample was collected to clean sterile wide mouthed glass bottle supplied by us. Mode of collection was masturbation. Instruction was given not to miss a drop while collecting sample. Semen examination was done as per the standard method (WHO 1992). Two parameters, total sperm count and percentage of sperm motility were considered as important in semen evaluation (Skandhan, Mazumdar 1982 b). The percentage of motility was rated from zero (all non motile) to hundred (all motile sperms). Assessment in terms of percentage of sperm with motility was also done; relative linear progressive (RLP), slow linear progressive (SLP), non progressive (NP) and non motile (NM).

RESULTS

The difference in total sperm count observed in standard and study group before, during and after treatment (BT) is presented in Figure 1. Treatment with SB and AC improved the sperm count and continued to remain even during and after treatment on fourth month. At the end of the study it is clearly seen SB Group doubled the sperm count where as in AC Group it has increased upto 60 percent.

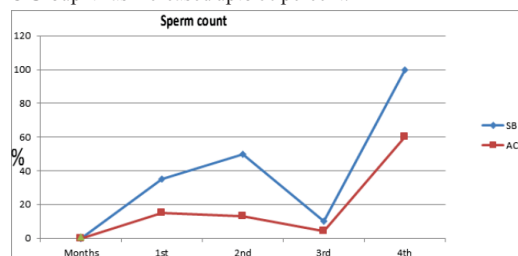
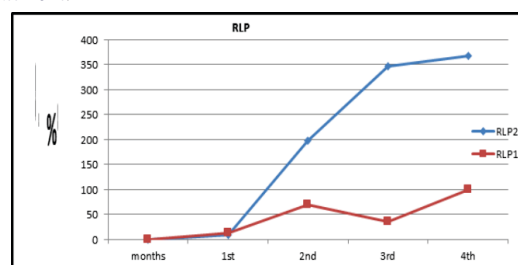


Figure 1. Difference in percentage of total sperm count after treatment.



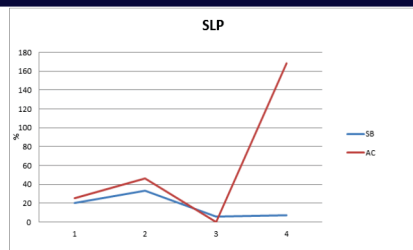


Fig 2. Showing difference sperm motility, RLP and SLP in percentage.

The percentage of sperm motility (RLP and SLP) of both groups, before and after treatment is presented in Figure 2. The treatment with SB showed no progress in RLP and NP during initial stage. SLP did not show any difference. Improvement (<0.05) in NP was seen after the first month of treatment. Count of immotile sperms was reduced in number after completion of the SB treatment (<0.05).

Figure 2 shows in AC Group, RLP doubled at the end of fourth month. It has improved more than 350 percentage among patients who were on SB treatment.

Patients of both groups showed an increase in SLP after first and second month of treatment. At the end of the fourth month SLP was more than 160 percentage in case of AC where as it was negligible in case of patients of SB group.

DISCUSSION

The sufferings of infertile couples in our society is mainly social in nature. Male or Female partner alone or partners together is responsible for infertility. Reasons for it are several and even today cause for many are not known. Collecting data on semen evaluation from world over shows male infertility rate is on rise (Mehra et al. 2018; Skandhan et al. 1986; Biradar 2017; Chaitrali et al. 2019). Medicine like Vardenafil and Tadalafil are prescribed in modern medicine (Kar, Kar 2005).

Ayurveda originated in India is the oldest systematic medical practice. It is being practiced widely in India and in few Asian countries. Other wise Ayurveda is not known much to the world.

Ayurveda classics imparts useful knowledge on different ailments, its clinical diagnosis and treatment using herbal preparations and rarely different metals and minerals at very minimal dosage. Bala (sida Cardifolia), Atibala (Abutilon indicum), Ashwagandha (Withania somnifera), Atmagupta (Mucunna prurita Hook) are some of few medicines prescribed in male infertility. Two of such treatments prescribed for male infertility are opted in this study; one herbal preparation, "Atmagupta" (Kamat 2002) and a metal preparation, "Suvarna Bhasma (SB) (Gold Ash)".

Atmagupta powder has been regularly prescribed in this institution for male infertility. AC is discussed in detail elsewhere (Kushwaha 2009). SB is prepared from pure gold as given in Ayurveda classics. The analytical study of it was reported (Prasad et al. 2011b). The effect of it in animals is studied (Godatwar et al. 2020). Its use for the treatment of male infertility gained large attention when gold was discovered in normal human semen (Skandhan 1981). The metal was shown as present inside and outside spermatozoa (Skandhan et al. 2009 b; 2011). Gold enters semen from testis and caput epididymis (Skandhan et al. 2011).

The presence of gold in semen was considered as important for fertility status. This was shown in semen studies of several pathological conditions where level of gold was low (Skandhan et al. 2010; 2017). Improvement in such cases are reported after undergoing SB treatment (Skandhan et al. 2009 a). Considering gold likely to be more in gold mine area and thus it might affect male infertility, a study was conducted to understand the fertility potentiality of male of that area. Study was compared to a far away place from any gold mine and showed the fertility rate in male population is high in gold mine area (Prasad et al. 2011a). Similarly level of gold in semen in people of both area are studied (Prasad et al. 2020). Sahabkhan et al. (2011) observed the level of gold in semen of men living nearby gold deposit area was high.

In the present study it was seen that the metal gold preparation in its ash form has increased sperm count and percentage of motility in patients when compared to that of preparation of Atmagupta (Figure 1 & 2).

Follow up study showed that the SB is most effective in increasing total sperm count and percentage of motility even after 3 months of treatment (Figure 1 & 2).

The patterns of sperm motility RLP improved and which was statistically significant in its follow up study. The graph shows (Figure 2) SLP was better following of treatment with SB. There was reduction in percentage of immotile sperm in treatment with SB.

The study proves as a choice of treatment in male patients with infertility, SB is a good choice. SB was a better course of treatment with normozoospermic infertile patients. The chances of gaining fatherhood was better with treatment when compared to that of AC.

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