

Evaluation of the Effects of Combined Administration of Two Indigenous Drugs - Speman and Tentex forte, on the Quality of Semen in Oligospermia

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Oligospermia in an otherwise clinically normal man, is one of the commonest conditions encountered in an infertility clinic. Medical management of oligospermia lags far behind expectations, and is still in an experimental stage. Efforts have been made to improve the semen picture of patients with the administration of hormones like testosterone, gonadotrophins or the ovulatory drug, Clomiphene citrate. Results observed after the administration of these compounds are not satisfactory and have failed to show consistency.

Search for non-hormonal compounds which may improve spermatogenesis and the semen quality has attracted the attention of clinicians and basic scientists in recent years. Several reports have appeared indicating beneficial effects of indigenous preparations like Speman, alone or in combination with Tentex forte on the gametogenic as well as androgenic functions of the testes in man and animals. Tentex forte, in addition, is being widely used as a sex restorative.

Vaze (1970) tried Speman in cases of oligospermia and all cases showed marked increase in sperm count and motility. Pantulu (1966) reported definite increase in sperm count and motility in 70% cases. Khandare *et al.* (1978) reported overall improvement in semen characteristics in 75% of subjects on using Speman alone. Vaidya (1970) and Bhargava (1970) also reported increase in sperm count and motility in 90% and 60% cases respectively with combined Speman and Tentex forte therapy in oligospermia.

Since Speman has been tried earlier, it was proposed to evaluate the effect of combining it with another indigenous non-hormonal compound, Tentex forte, on the quality of semen in oligospermia.

MATERIAL AND METHODS

This study comprises of 30 oligospermic, infertile, married males who were referred to the Infertility clinic of the Physiology Department, Medical College, Nagpur. A detailed clinical history was taken to exclude any recent and past major illness of V.D. which might affect the male reproductive functions. Physical examination was carried out to rule out any endocrinological disorder or genital abnormality.

The semen samples were analysed before starting the treatment. The subjects were given two tabs. of Speman thrice a day and Tentex forte one tab. twice a day. The duration of treatment lasted 2 to 6 months. The semen samples were analysed at monthly intervals during the treatment period. The semen analysis comprised of (1) Volume in ccs. (2) Sperm count in millions/cc. (3) Total sperm count (4) Motile count per cc. (5) Total motile count.

Every effort was made to devise a method which would help evaluation of the therapy and identification of patients with better prognosis.

A semen sample was termed as oligospermic when the sperm density was less than 40 million/cc before the onset of treatment. Oligospermia was classified into 3 categories depending upon the sperm density: (1) Mild oligospermia, (2) Moderate oligospermia, (3) Extreme oligospermia.

- (1) *Mild oligospermia*: Comprised of patients in whom the sperm count was more than 20 million/cc but less than 40 million/cc. Nine out of 32 patients belonged to this category.
- (2) *Moderate oligospermia*: The patient was classified into this category when the sperm count was more than 5 millions but less than 20 million/cc. Eighteen patients belonged to this category.
- (3) *Extreme oligospermia*: The patient was assigned to this category when sperm density was less than 5 million/cc. Five patients fell in this category.

The primary determinants of male fertility potential are the sperm density and motility. So, for better evaluation of the effect of treatment, these two determinants were assessed singly as well as collectively.

- I. Sperm density: A rise in sperm density upto 40 million/cc and above was termed as a good increase; whereas a rise of more than 15 million but less than 40 million/cc was termed as a moderate increase.
- II. Motility: This was studied in terms of motile count/cc and when the motile count was doubled or more than that, the treatment response was called a 'good' increase, whereas improvement in motile count by less than two times was called a moderate increase.

Overall improvement was judged by the combined change in sperm density and motility.

OBSERVATION AND RESULTS

Table I depicts the mean values of different characteristics of semenogram in mild, moderate and extreme oligospermia, at the commencement and at the termination of the treatment with the combination of two indigenous drugs, 2 Speman tabs. three times a day and Tentex forte 1 tab. twice a day over a period of 2 to 6 months. It is obvious from the Table 1 that the drug combination improved the parameters. *viz.* the sperm count and motility. The improvement was observed in the semen picture of mild and moderate oligospermic patients, whereas there was very meagre response to treatment apparent in extreme oligospermia.

Table 1: Sperm volume in c.c. and values in million per 1 c.c.						
Oligospermia		Volume in c.c.	Sperm count in million/c.c.	Total sperm count in millions	Motile sperm count million/c.c.	Total Motile sperm count in million/c.c.
Mild	Before	2.1	29.4	62.7	9.1	18.2
	After	2.2	35.5	80.0	17.3	37.0
Moderate	Before	2.7	13.8	40.2	8.9	22.1
	After	2.7	27.7	82.2	17.1	47.3
Extreme	Before	2.4	2.4	6.6	0.5	1.7
	After	2.4	1.8	4.5	0.9	2.5

Sperm density: On further analysis, Table II shows the effect of treatment on sperm density. In 5 of the 9 mild oligospermic patients, there was good increase in sperm density. One patient showed a moderate increase and in the remaining three, there was no increase. Out of 18 patients of moderate oligospermia, a good increase was observed in 6, there was a moderate increase in another 6 and no increase in the remaining 6. There was no increase in sperm density in 5 patients with extreme oligospermia. In 11 patients, the sperm density reached normal levels.

Table II: Effect of Speman and Tentex forte on sperm count				
Type of Oligospermia	No. of patients	Good increase	Moderate increase	No increase
Mild	9	5	1	3
Moderate	18	6	6	6
Extreme	5	Nil	Nil	Nil
Good increase – Sperm count/c.c. increased to 40 millions or above.				
Moderate increase – Sperm count/c.c. more than 15 millions and less than 40 millions.				

Motility: Table III depicts the effect of treatment in the three groups of patients. Out of the 9 patients of mild oligospermia there was good increase in motility in 5 and a moderate increase in the remaining 4. Eleven patients of moderate oligospermia showed a good increase, whereas 2 showed a moderate increase; the remaining 5 did not show any increase. There was no change in motility in the semen of patients with extreme oligospermia.

Table III: Effect of Speman and Tentex forte on motility count of sperms				
Type of Oligospermia	No. of patients	Good increase	Moderate increase	No increase
Mild	9	5	4	Nil
Moderate	18	11	2	5
Extreme	5	Nil	Nil	Nil
Good increase – Motile count increased more than 2 times.				
Moderate increase – Motile count increased less than 2 times.				
No increase – No change in motile count.				

When the two determinants of fertility potential, namely sperm density and motility were considered together, the treatment proved beneficial in 81% of the subjects of mild and moderate oligospermia. In patients with extreme oligospermia there was no response even after the administration of the drugs for a period of 6 months.

DISCUSSION

Vaze (1970) in a limited study of seven cases of oligospermia observed increase in sperm count and motility in all patients whereas Pantulu (1966) reported an improvement in semen characteristics in 70% subjects with administration of only Speman. Combined Speman and Tentex forte therapy was tried by Vaidya (1970) and Bhargava (1970) with improvement in sperm count and motility in 60% and 90% cases respectively. Compared with their results, in this present study there was moderately good increase in sperm count and motility in 81% of the patients of mild and moderate oligospermia. Patients of extreme oligospermia showed an insignificant response.

The authors (1978) had earlier studied the effect of Speman on the quality of semen in oligospermia and observed an overall improvement in 75% of subjects. In the present study where evaluation is based on quantitative improvement in sperm count and motility, the primary determinants of fertility potential, the response to combined therapy is 81% and seems to be superior to the response obtained by administration of Speman alone. Patients of all age groups respond equally well to combined treatment.

The administration of non-hormonal preparations, Speman and Tentex forte has been effective in promoting spermatogenesis and motility in the first two categories suggesting that they have been able to restore normalcy in the functioning of the germinal epithelium. This could be due to the drugs having provided better environment to the germinal epithelium so that the normally secreted gonadotrophins would be able to act better. It has also been claimed that Speman can somehow help recover the functions of damaged testes in experimental animals. It could be so in human testes also.

SUMMARY

Two non-hormonal indigenous preparations Speman tablets, t.i.d. and Tentex forte b.i.d. were administered as a combined therapy to a group of 32 oligospermic, infertile, married males for a period of 60 to 180 days. Improvement in the semen picture and fertility potential was seen in 22 out of 27 cases (81%) whose sperm count was more than 5 million sperms/cc at the commencement of the treatment. Patients with extreme oligospermia (Sperm density less than 5 million/cc) did not show any improvement even after 6 months of treatment. Non-hormonal combined drug therapy with Speman and Tentex forte is helpful and more effective and is superior to Speman therapy alone.

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