

CLINICAL PROFILE OF INFERTILE MALE PARTNER .

(350 Cases)

by

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SUMMARY

Three hundred fifty male partners of infertile couples have been evaluated for their fertility status. 42.4% were found to be normal 43.8% were subfertiles. Rest 13.6% cases were azoospermic. In subfertility group, on semen analysis 23.8% cases were moderately oligospermic and 41 were having severe degree of oligospermia. High incidence of subfertility and sterility in present series is likely to be due to high climatic temperature, tight dhoti wearing, poor nutrition, heavy smoking and tobacco chewing habits. Concurrent infective diseases and S.T.D. may also be contributing to the causation of infertility.

Simple semen analysis is insufficient for evaluation of fertility status of male partner, but thorough clinicopathological and if possible hormonal evaluation is needed before any course of therapy is started else the therapeutic trial may be harmful to him.

Introduction

Infertility is a potent cause of anxiety and emotional disturbances (Platt *et al* 1973). Barren couple is found to live an unpleasant social life. It has been estimated that as many as 10% of all the couples may face some difficulty in starting a family growth and incidence could be higher in some of the regions (WHO, 1975; Hendry, 1975). In most of series of infertility, approximately 40-60% have

no discernible cause for infertility (Southam and Banten 1957; and Bayertz, 1967). In about 30% of infertile couples, the abnormality lies in the husband but in next 20-30% the abnormality is found in both the partners (Bayertz, 1967).

There should be no doubt about the need of an efficient infertile couple oriented infertility service or clinic, with the aim of defining as accurately as possible the cause of problem and hence to provide with an accurate prognosis in such an individual couple.

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Material and Methods

Since March, 1982, we have started such clinic in Obst. and Gyane. Department, Umaid Hospital, Jodhur. Male partners of 350 infertile couples registered till December, 1984 have been analysed

in present study. After thorough interrogation and clinical examination of male partners, their semen analysis was done. Methodology and interpretation of semen analysis was done as described by WHO, 1975.

*Observations and Discussion**Cross-Sectional Observations*

S. No.	Factors	No. of cases	Normospermia	Oligospermia	Azoo-Spermia	Necrospermia	Cases Who did Not Come for Semen Analysis
1	2	3	4	5	6	7	8
1.	Smoking	148	68	5+2*	7	2	20
2.	Tobacco-chewing	52	31	9+1*	5	1*	6
3.	Alcohol	68	40	16+1*	2	1*	9
4.	Opium	8	4	4	—	—	—
5.	Cannabis	3	2	1	—	—	—
6.	Heat Exposure	31	11	7+1*	4	1*	7
7.	Radiation Exposure	10	8	2	—	—	—
8.	Chemicals	6	4	2	—	—	—
9.	Pesticides	8	2	5+1*	—	1*	—
10.	Syphilis	17	12	5	—	—	—
11.	U.T.I.	6	4	2	—	—	—
12.	Gonorrhoea	16	3	8+1*	—	1*	5
13.	T.B.	6	1	3	1	—	1
14.	Mumps	8	1	2+1*	2	1*	2
15.	Undescended Testes	6	—	1	4	—	1
16.	Small Testes	50	—	33+3*	14	3*	—
17.	Varicocele	12	3	8	—	—	1
18.	Local Trauma (Operative)	17	8	7	2	—	—
19.	Local Trauma	5	1	2	2	—	—
20.	Premature Ejaculation	25	18	6	—	—	1
21.	Impotence	5	2	3	—	—	—
22.	Sleeplessness	13	9	3	—	—	1
23.	Hot Water Bath	10	6	3	—	—	1
24.	Pyospermia	111	35	72+4*	—	4*	—
25.	Tight undergarments	29	14	15	1	—	—
26.	Masturbation	10	8	1	—	2*	1
27.	Genital Infection (Acute/Chronic)	10	1	6+2*	1	2*	—
28.	Hydrocele	1	—	1	—	—	—
29.	Testicular Tumour	1	—	1	—	—	—

It is important to remember that it is the couple who has an infertility problem and not the individual. A thorough and systemic evaluation of man seeking a fertility assessment is important in order to determine what therapeutic measure may be useful for an individual.

Out of 350 cases of present series, 247 (70.6%) were belonging to 21-30 years of age group, which is the period of maximum reproductive activity; while 20.86% cases were aged 31-40 years and 13 cases were above the age of 41 years. Rest 5 cases (1.5%) were below the age of 20 years. Twelve males have not turned up in sterility clinic, though their wives have been seeking the advice. Study cases lived equally in urban (49.7%) and rural (46.9%) area. So far the literacy is concerned, 79% were literate (primary standard to post-graduation). Majority (87.7%) of them enjoyed the average built and health, only 20 (5.7%) and 11 (3.1%) were underweight and obese respectively.

In present series, 30.3% and 11.7% cases were heavy and occasional smokers respectively. Kampanal and Hamson (1979) reported that 53% of male smokers had less than 60% motile sperms. Briggs (1973) estimated lower plasma testosterone level among the smokers as compared to non-smokers. He also found that cessation to smoking resulted in increased testosterone level. Oligospermia 53 cases, Azoospermia 7 cases and necrospermia 2 cases were found in the smokers of present series. Evans *et al* (1981) has reported a greater incidence of abnormal sperms on semen analysis of smokers as compared to the non-smokers. Mohammed Shaaraney *et al* (1982) have also reported the significant increased percentage of abnormally formed (terato-spermia) in smokers.

15% cases of present study were tobacco chewers and 9 of them were occasional tobacco chewers. Their semen analysis revealed oligospermia (10 cases), Azoospermia (5 cases) and necrospermia in one case. Sixty eight (19.4%) cases were alcoholics; 5.1% being chronic drinkers. Oligospermia, azoospermia and necrospermia was found in 17, 5 and 1 case respectively. Sherins (1978) and Mendelson and Mello (1979) have also expressed that excessive use of alcohol may result in impotence and reduced fertility. Chronic alcoholism is associated with cirrhosis of liver, and poor leydig cell activity leading to lower testosterone level resulting in subfertility and even small atrophic testis.

Opium addiction was detected in 8 (2.3%) cases, while another 3 cases (0.86%) were habitual cannabis indica taker. Oligospermia was found in 4 cases of opium addiction and 1 case of Cannabis taker. Opium imparts its effect on hypothalmo-hypophysial axis, by which it reduces volume of ejaculated semen and poor seminal quality (oligo-hypospermia) Ciero *et al* (1975). Cannabis indica lowers serum testosterone level and leads to hypooligospermia and gynaecomastia (Kolondy *et al* 1975 and Hambree, 1976).

Hazard of occupational heat exposure was found in 31 (8.9%) cases with concurrent findings of oligospermia in 8, azoospermia in 4 and necrospermia in 11 cases. Crew (1972) suggested that higher intraabdominal/intrainguinal temperature results in testicular atrophy in cases of undescended testes. Tight undergarments viz. Dhoti, Langot, hot bath also cause reduced sperm count and motility. In present series, also 15 out of 29 cases wearing tight dhoti were having moderate degree of oligospermia 50% of

hot water bath takers were also having oligospermia and poor sperm motility (less than 30%). Azoospermia 4 and oligospermia 1 was found in 5 out of 6 cases of undescended testes.

History of occupation hazard due to radiation was noted in 10 cases (2.86%) and only 2 (20%) were markedly oligospermic. Two out of 6, textile industrial workers, exposed to chemical dye used in printing, were found to have severe oligospermia and 1 of them had spermatogenic arrest on testicular biopsy. Potashink *et al* (1978) have reported that chemicals like D.D.T. and chlorodicon suppress spermatogenesis. Eight farmers in present series were exposed to pesticides and 6 of them had oligospermia and one had necrospermia. Psychosomatic disorders like premature ejaculation (7.1%), impotence (1.43%), sleeplessness (3.7%) and habit of masturbation (2.86%) were found in present study. Thirteen out of 53 of these cases had oligospermia. The influence of emotional factors on quality and quantity of seminal fluid has to be kept in mind.

History of STD was reported by 33 (9.5%) cases and 17 out of them were seropositive for V.D.R.L. test. On their semen analysis 14 cases were oligospermic and one was having necrospermia. Ten cases had genital infection like epididymitis, orchitis and their semen analysis disclosed oligospermia 8, azoospermia 1 and necrospermia 2 cases. History of local trauma, tuberculosis, local surgical operation was present in 5, 6 and 17 cases respectively, while 8 cases had suffered from mumps in their childhood. Tuberculosis, STD, local diseases and trauma can cause epididymal vasal block or testicular atrophy, while prostaticitis and epididymitis can interfere with normal ejaculate (quality and

quantity) and sperm vitality. Mumps in males can result in atrophy of testicles. Systemic disease like viral/bacterial fever can also adversely effect the process of spermatogenesis for a variable period, thereby affecting the sperm density and motility. Oligospermia, azoospermia, hypomotility of sperm and necrospermia was found in cases with, positive history of tuberculosis, STD, mumps, filariasis, local trauma (operative/nonoperative). Wolmisty (1962) and Denick (1966) reported that urinary tract infection is having adverse effect on sperm density, structure and motility. NFT like drugs frequently prescribed for U.T.I. have also been reported to be harmful for seminiferous tubular activity. In present series also 2 out of 6 cases having U.T.I. had oligospermia. Homas *et al* (1975) and Johanison and Eliasson (1976) reported that U.T.I. was four times more common in infertile males.

Secondary sex characters were well developed in 337 cases except 1 who had small phallos and small scrotum. Hypospedias was seen in 4 cases. Testicular location and size was normal in 332 and 280 cases respectively. Unilateral small testes was found in 7 cases while 50 cases had bilateral small testes. Unilaterally and bilaterally undescended testis were found in 3 and 3 cases respectively. One case was having unilateral testicular neoplasm. Oligospermia was found in 36 out of 50 cases of small testis while azoospermia and necrospermia was detected in 14 and 3 cases respectively, Buchanan *et al* (1975) explained the genital-epithelium account for over 75% of volume mass of testis. Small testis could result due to trauma, irradiation, mumps, undescended testis, chromosomal disorder and secondary to hypothalmo-

pituitary disease. Findings of present series are in agreement with above workers and hence can be concluded that these conditions are associated with subfertility in males.

In present study of 350 cases, varicocele was present in 12 (3.4%) cases and 8 of them had oligospermia. Russal (1954) reported 9.2% incidence of varicocele in infertile males with poor semen quality. Mcloed (1965) has also reported subfertility among the cases of varicocele and higher ligation of pampiniform plexus has been correlated with improved fertility and semen quality.

High incidence of subfertility and sterility in present series may be due to high climatic temperature, tight dhoti wearing, poor nutrition, high incidence of smokers and addiction to opium/cannabis and tobacco etc., concurrent infective diseases and S.T.D. may also be the contributing to the subfertility to available extent.

Conclusion

350 male partners of infertile couples have been evaluated for their fertility status. 42.4% were found to be normal while 43.8% were subfertile. Rest 13.6% cases were azoospermic.

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