

## CORRELATION OF POST COITAL TEST AND ANTISPERM ANTIBODIES

S. CHHABRA ● NEENU OIRI

### SUMMARY

It is believed that the cervical mucous acts as a filter allowing only the functioning best spermatozoa to penetrate cervical mucous. It is also believed that if antisperm antibodies are present in a women who achieves pregnancy the prognosis of pregnancy is not good. In our study of 30 cases with recurrent abortions & 30 with normal live births a good correlation was found between the results of ASA positivity by ELISA & postcoital test results.

It is believed that the cervical mucous acts as a filter allowing only the functioning, best spermatozoa to penetrate cervical mucus (Peterson 1980). Moghissi et al (1980) observed that sperm antibodies may reach various fluids or segments of the female genital tract and interfere with sperm transport, survival and capacitation or with fertilization and embryonic development processes. One of the observed functional correlation of antisperm antibodies whether present in the sera or genital tract secretion of the male or female is inhibition of sperm penetration of cervical mucus (Moghissi et al 1980, Fjallbrant 1968).

It was Hass et al in 1986 who supported the theory that if ASA are present in a women who achieves pregnancy the prognosis for that pregnancy is not good.

In the present study also an attempt was made to find out the relation between antisperm antibodies detected by ELISA and postcoital test results in women with recurrent abortions.

### MATERIAL & METHODS

In the present study antisperm antibodies (ASA) were detected by ELISA in 60 women. Thirty nonpregnant women with two or more first trimester abortions were study group, Similarly 30 cases with previous live birth were studied, group C. In all these women, results of post coital test (PCT) were compared

*Dept. of Obst. & Gynec., M. G. I. M. S., Sevagram, Wardha.*

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with ASA positivity.

### OBSERVATIONS

It was observed that amongst women who were positive for ASA 33.34% had negative post coital test as compared to 18.52% amongst those with negative results for ASA (P value < 0.05). Similarly out of 16 women which were having negative PCT 11 (68.75%) were positive for antisperm antibodies (Table I) & Table II). PCT was considered negative if no sperm or no motile sperm were present in mid cycle cervical mucus and rest all with any number of motile sperms were taken as positive PCT.

### DISCUSSION

Peterson (1980) reported that complement plays a role in the cervical mucous test. It was also believed that antibodies secreted in cervix could possibly indicate those on the endometrium which might impair implantation.

Women with poor postcoital test compared with those with good results were more likely to exhibit antisperm antibodies in the serum observed (Teland et al 1978) or cervical mucous (Hass et al 1986). In our study also correlation was studied between postcoital test and circulating antisperm antibodies. It was observed that 16 couples were having negative

Table I

Relationship between post coital test and ASA

ASA	Post Coital Test					
	Negative		Positive		Total	
	No.	%	No.	%	No.	%
Positive	11	33.33	22	66.67	33	100
Negative	5	18.52	22	81.48	27	100
Total	16	26.67	44	73.33	60	100

Table II

Post Coital Test Inrelation to ASA Results in Groups and Group C

Group	Total	Positive for AS				Negative for ASA			
		PCT+Ve		PCT-Ve		PCT+Ve		PCT-VE	
		No.	%	No.	%	No.	%	No.	%
Study	21	13	61.07	8	38.93	7	77.8	2	22.2
Control	12	9	75.00	3	25.00	15	83.33	3	16.67
Total	33	22	66.66	11	33.34	22	81.48	5	18.52



post coital test out of 60 cases screened (in 3, 2, and 5) C groups. Of these, 68.75% (11 cases of 16) cases showed high circulating ASA in serum as compared with 50% (22 cases out of 44 total cases with positive PCT). Similarly in those cases having positive ASA 66.66% had positive PCT as compared to 81.48% cases with a negative ASA. The above observation suggested a relationship between negative PCT and ASA in the serum.

In a study of 400 cases of infertile subjects Stone and Schveman (1977) found that 43% of those with antibody positive sera were also mucous positive. In 1968 Fjallbrant reported a strong correlation between the concentration of antisperm antibodies and the inability of the spermatozoa to penetrate the ovulatory cervical mucous. Kremmer (1978) has also suggested the presence of persistently poor PCT in infertile couples having a high level of

antisperm antibodies in the serum. Moghissi et al (1980) also found good correlation between the antisperm antibodies and the ability of the sperm to invade the cervical mucous effectively. It appears that PCT may be a reliable, simple method of detecting presence of sperm antibodies in women with recurrent abortions.

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