

BLOOD GROUPS IN CASES OF INFERTILITY

by

S. P. TYAGI,* M.D.,

NAJMA ABBASI,** M.B.B.S.,

KUSUM SAXENA,*** M.S.,

RUQQAIYA RIZVI,**** M.S.

and

S. HAMEED,***** M.D., D.Path. (Lond.)

The study of blood groups in infertility has been undertaken on a large scale. Very few reports are available (Boettcher and Hay 1968; Allan 1970; Shah et al 1972).

Material and Methods

The present study comprised of 330 cases of infertility attending the outpatient section of the Department of Obstetrics and Gynaecology, Jawaharlal Nehru Medical College, Aligarh. Only those cases were included where the semenograms of the male partners were normal.

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ABO blood grouping was done with high grouping sera and the final grouping was confirmed by matching the sera of the patients against known cells. Rhesus typing was done with the help of anti-D serum (Human) obtained from

TABLE I
Distribution of ABO Blood Groups in Cases of Infertility

	Total Cases	Blood				Groups			
		Number				Percentage			
		A	B	O	AB	A	B	O	AB
Infertility cases	330	80	114	101	35	24.24	34.54	36.61	10.61
Control cases	2960	725	1029	917	289	24.49	34.76	30.98	9.77
Increase or decrease on control						-0.25	-0.22	-0.37	+0.84

$X^2 = 0.077$ at 3 d.f.
5%

*Reader in Pathology.
 **Demonstrator in Pathology.
 ***Lecturer in Obstetrics & Gynaecology.
 ****Reader in Obstetrics & Gynaecology.
 *****Professor and Head of the Department of Pathology, From the Departments of Pathology and Obstetrics & Gynaecology, Jawaharlal Nehru Medical College, Aligarh Muslim University, Aligarh (U.P.).

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M/s. Bharat Laboratories Ltd., Bombay. For control 2960 females were taken. These subjects were of average health and free from any specific disease.

Results

The distribution of ABO blood groups in cases of infertility and control series has been shown in Table I. The frequency

of blood groups A, B, O and AB in infertility cases was 24.24%, 34.54%, 30.61% and 10.61% respectively as compared to 24.49%, 34.76%, 30.98% and 9.77% respectively in the control series. Thus there was not much difference in the distribution of ABO blood groups in cases of infertility as compared to control series. On statistical evaluation the difference was also found to be insignificant as the calculated value of X^2 was 0.077 which was lower than the tabulated value of X^2 (7.82) at 3 d.f. at 5% level of significance.

The incidence of Rh (D) negative cases was 2.12% among infertility cases as compared to 3.14% in control series (Table II). This difference was, how-

ever, found to be statistically insignificant as the observed difference (1.02) between the two groups was less than twice the standard error (S.E.) of difference (2×0.86) between the two proportions.

Hay 1968; Allan 1970, Shah *et al*, 1972). Boettcher and Hay (1968) studied the relationship of blood groups to infertility among 63 infertile couples but they failed to demonstrate any significant correlation between the two. Allan (1970) reported same distribution of group O and A in infertile cases as observed in general population. Shah *et al*, (1972) while studying 100 couples of infertility have reported that 40% of the female partners belonged to group O, 31% to group B, 24% to group A and 5% to group AB; a distribution of blood groups, very much similar to that seen in general population.

Secretor frequency was not estimated in the present study. However, Boettcher

TABLE II
Rhesus Typing in Cases of Infertility

	Total Cases	Rhesus Typing	
		Rh (D) Positive	Rh (D) Negative
Infertility Cases	330	323 (97.88)*	7 (2.12)
Control series	2960	2867 (96.86)	93 (3.14)

* Figures in parenthesis indicate percentage.

Discussion

Thus it was observed that there was no significant difference in the distribution of ABO blood groups and Rhesus typing in cases of infertility as compared to control series. The findings of the present study were in agreement with those of other workers (Boettcher and

Hay (1968) have found no significant difference in the proportion of secretors and nonsecretors among infertility cases from the proportions in the population from which they were drawn.

Summary

ABO blood grouping and Rhesus (anti-D) typing was done in 330 cases of infertility and 2960 control cases. The frequency of blood groups A, B, O and Ab was 24.24%, 34.54%, 30.61% and 10.61% respectively in infertility cases and 24.49%, 34.76%, 30.98% and 9.77% respectively in control series.

Rh (anti-D) negative cases were 2.12% among infertility group as compared to 3.14% in control series.

Statistically no significant difference was observed as far as the distribution of blood groups in cases of infertility is concerned or in other words the occurrence of infertility is in no way associated with any particular blood group.

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