ABO Blood Groups and Vitiligo

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The 'secretion' of ABO blood group substances in the saliva of vitiligo patients has been recorded elsewhere (Sehgal and Dube, 1967, 1968). In the course of those studies the ABO blood groups of all the vitiligo patients were determined as a prerequisite to testing the 'secretor' state, and the present note records these findings.

Materials and Methods

One hundred and seventy-three patients with vitiligo, diagnosed at the dermatological out-patient clinic of Sir Sunder Lal group of hospitals, were included in the study. In all cases the diagnosis was made on clinical grounds. Cases of skin depigmentation other than vitiligo were excluded by history, clinical examination, and appropriate laboratory investigations. Only 2 of the patients were blood relatives (sisters), all others being unrelated to each other. The ABO blood grouping was carried out by the slide technique (Stratton and Renton, 1958). The results were compared with 615 normal controls (Sehgal, Mathur, and Rao, 1966) drawn from comparable populations.

Observations

Table I shows the frequency distribution of ABO blood groups in vitiligo patients and in the normal controls. In vitiligo the proportions of blood groups B and A are higher and the incidence of blood group O is lower than in the controls; the AB blood group differs little in the two groups. Table II compares the frequencies of O and 'not-O' in normals and vitiligo patients.

It will be seen from Table I that the differences in the distribution of ABO blood groups among the vitiligo patients as compared with the normal population are highly significant ($\chi^2 = 15.537$; $p < 0.0016$ or < 1 in 625). Similarly Table II, where the proportions of O and 'not-O' are tested, shows a highly significant difference in the two populations ($\chi^2 = 13.01$, d.f. = 1; $p < 0.003$).

Discussion

In 80 cases of vitiligo, El-Hefnawi, Mohieddin, and Rasheed (1963) found a greater incidence of AB groups than in their controls, and Singh and Shanker (1966), in a similar study on 100 cases, found a statistically significant association of vitiligo and AB grouping. In observations of 535 patients, Srivastava and Shukla (1965) reported a high incidence of blood group B, a finding sup-

TABLE I
FREQUENCY OF BLOOD GROUP DISTRIBUTION IN 615 NORMAL SUBJECTS AND 173 VITILIGO PATIENTS

Blood Groups	Normal Controls (Sehgal <i>et al.</i> , 1966)		Vitiligo Patients		Total
	No.	%	No.	%	
A	119 (128.00)	19.3	45 (36.00)	26.02	164
B	244 (256.00)	39.7	84 (72.00)	48.55	328
AB	61 (59.32)	9.9	15 (16.68)	8.67	76
O	191 (171.71)	31.1	29 (48.29)	16.76	220
Total	616		173		788

$\chi^2 = 15.537$ for 3 degrees of freedom.
 $p = 0.0016$ or 1 in 625.

TABLE II
FREQUENCIES OF O AND 'NOT-O' IN NORMALS AND VITILIGO PATIENTS

	Blood Groups		Total
	O	Not-O	
Normals	191 (171.701)	424 (433.299)	615
Vitiligo	29 (48.299)	144 (124.701)	173
Total	220	568	788

Note: Expected figures in brackets.
 $\chi^2 = 13.01$ for 1 degree of freedom.
 $p = 0.0003$ (Yate's adjustment used).

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ported by the present study, which also records a much lower susceptibility in individuals with blood group O.

The accumulated data thus show a clear correlation with blood groups and vitiligo.

Summary

In a new series of 173 patients with vitiligo there was a statistically significant excess of patients with blood groups B and A and a deficiency of patients with blood group O.

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REFERENCES

- El-Hefnawi, H., Mohieddin, O., and Rasheed, A. (1953). ABO blood groups in various skin diseases. *J. Egypt. med. Ass.*, **47**, 1097.
- Sehgal, V. N., and Dube, B. (1967). Secretion of blood group specific substances in saliva of vitiligo patients. *Brit. J. Derm.*, **79**, 704.
- , and — (1968). Secretary state in vitiligo. *Dermatologica (Basel)*. In the press.
- , Mathur, J. S., and Rao, N. S. N. (1966). ABO blood groups in leprosy. *Leprosy Rev.*, **37**, 221.
- Singh, G., and Shanker, P. (1966). Vitiligo and blood groups. Preliminary report. *Brit. J. Derm.*, **78**, 91.
- Srivastava, G. N., and Shukla, R. C. (1965). ABO blood groups in vitiligo. *Indian J. med. Res.*, **53**, 221.
- Stratton, F., and Renton, P. H. (1958). *Practical Blood Grouping*, p. 116. Blackwell Scientific Publications, Oxford.