
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; $p < 0.003$).

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### Table I

<table>
<thead>
<tr>
<th>Blood Groups</th>
<th>Normal Controls (Sehgal et al., 1966)</th>
<th>Vitiligo Patients</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>A</td>
<td>119</td>
<td>19-3</td>
<td>45</td>
</tr>
<tr>
<td>B</td>
<td>244</td>
<td>39-7</td>
<td>84</td>
</tr>
<tr>
<td>AB</td>
<td>61</td>
<td>9-9</td>
<td>15</td>
</tr>
<tr>
<td>O</td>
<td>191</td>
<td>31-1</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td>616</td>
<td>173</td>
<td>788</td>
</tr>
</tbody>
</table>

$\chi^2 = 15.537$ for 3 degrees of freedom.

p = 0.0016 or 1 in 625.

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### Table II

<table>
<thead>
<tr>
<th>Blood Groups</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td></td>
</tr>
<tr>
<td>Not-O</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Normal</th>
<th>615</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitiligo</td>
<td>173</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Normal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td></td>
</tr>
<tr>
<td>Not-O</td>
<td></td>
</tr>
</tbody>
</table>

$\chi^2 = 13.01$ for 1 degree of freedom.

p = 0.0003 (Yate's adjustment used).

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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-
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**


ABO blood groups and vitiligo.

V N Sehgal and B Dube

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