**BRIEF NOTE**

**Hemoglobin S in Eti-Turks and the Allewits in Lebanon**

*By Muzaffer Aksoy*

It has been known for some time that the Eti-Turks possess the highest incidence of sickling in the white race.1 Several previous papers have discussed the characteristics of these people and have described the incidence of abnormal genes responsible for thalassemia and abnormal hemoglobin.2-8 It was also pointed out in some of these papers that the Eti-Turks and the Allewits of Syria and Lebanon may have the same racial background.2-4

The purpose of this brief note is to draw attention to the occurrence of sickling among the Allewits living in Lebanon and also to give a better picture of the incidence of sickling among Eti-Turks living in southern Turkey.

**Materials and Results**

Blood from 691 persons was examined for sickling according to the method of Daland and Castle;9 blood from 150 of these subjects was also examined by paper electrophoresis, using a method described previously.4 The bloods examined were drawn primarily from school children in five different geographical areas. The results of these investigations are summarized in table 1; according to these data and those of another study done previously among Eti-Turks,1 the incidence of sickling is quite high in this community in southern Turkey: namely, 16.8 per cent (table 2). On the other hand, the incidence of sickling among the Allewits in Tripoli, Lebanon, is relatively low (4 per cent).

**Comments**

In accordance with our expectations, this study showed a high incidence of sickling (16.8 per cent) among Eti-Turks living in southern Turkey. Among the different groups of the same people, however, there was a wide range of sickling, fluctuating between 5.4 and 27.3 per cent. Even in villages that were very close to each other, such as Nesli and Fernek (table 1), the incidence of sickling was quite variable.

If one speculates on the origin of hemoglobin S among Eti-Turks, one must consider the relative proximity of Africa to southern Turkey, the home of these people. Since this group probably emigrated to Turkey from Syria and Egypt, the hemoglobin S may be of African origin. The low incidence of cDe7 and the absence of African features2-4 however, argue against this assumption.

For centuries the Middle East has been the crossroads of trade, war, and emigration by different races. It is quite possible that some Vedoids from India10 or even some white races (Greeks or Italians) harboring a high incidence of sickle cell genes11,12 could have mixed with the Eti-Turks some time during the centuries.

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Table 1.—The Incidence of Sickling in 4 Groups of Eti-Turks Living in Southern Turkey and in the Allewits in Tripoli, Lebanon

<table>
<thead>
<tr>
<th>Group</th>
<th>No. tested</th>
<th>No. with sickle cell trait</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Iskenderun</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fernek</td>
<td>114</td>
<td>30 (26.2%)</td>
</tr>
<tr>
<td>Nesli</td>
<td>150</td>
<td>19 (12%)</td>
</tr>
<tr>
<td>2. Antakya</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harbiye</td>
<td>74</td>
<td>4 (5.4%)</td>
</tr>
<tr>
<td>3. Adana</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Karataş</td>
<td>102</td>
<td>20 (19.5%)</td>
</tr>
<tr>
<td>4. Mersin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kelahmet and the others</td>
<td>150</td>
<td>41 (27.3%)</td>
</tr>
<tr>
<td>5. Lebanon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Allewits in Tripoli</td>
<td>101</td>
<td>4 (4%)</td>
</tr>
<tr>
<td>Totals</td>
<td>691</td>
<td></td>
</tr>
</tbody>
</table>

Table 2.—The Incidence of Hemoglobin S in Eti-Turks Living in Southern Turkey

<table>
<thead>
<tr>
<th>Group</th>
<th>No. tested</th>
<th>No. with sickle cell trait</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iskenderun, Antakya,</td>
<td>590</td>
<td>113 (19.1%)</td>
</tr>
<tr>
<td>Adana, and Tarsus</td>
<td>376</td>
<td>50 (13.3%)</td>
</tr>
<tr>
<td>Mersin and others</td>
<td>966</td>
<td>163 (16.8%)</td>
</tr>
</tbody>
</table>

The present investigation showed an incidence of only 4 per cent sickling among the Allewits school children in Tripoli, Lebanon. This low incidence of hemoglobin S carriers can be compared only to the incidence among Eti-Turks living in Harbiye, near Antakya (see table 1). Further local investigation of sickling among the Allewits in Syria and Lebanon, on a much larger scale, should yield significant data.

Summary

(1) The incidence of sickling among 966 people belonging to the Eti-Turk community in southern Turkey was found to be 16.8 per cent.

(2) Among the Allewits living in Lebanon—who are considered to have the same racial background as the Eti-Turks—the incidence of sickling was only 4 per cent.

Summario in Interlingua

1. Le incidentia de falciformation inter 966 subjectos in le communitate de eti-turcos in Turchia meridional esseva 16.8 pro cento.

2. In le allewits de Lebanon—qui es considerate como del mesme origine racial como le eti-turcos—le incidentia de falciformation esseva solmente 4 pro cento.

Addendum

Since submission of this manuscript, Dr. Firzli, Pediatric Department of the American University of Beirut, has found a case of sickle cell anemia from Tripoli of Allewits origin.
HEMOGLOBIN S

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REFERENCES


Dr. Muzaffer Aksoy, The 2nd Internal Clinic of Istanbul Medical School, Vakif Guraba Hospital, Istanbul, Turkey.
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