TONSILLITIS AND SPLENOMEGALY

BY

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AND

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TONSILLITIS is a common disease among people of both sexes and all ages, and it is commonly regarded as a mundane, rather trivial illness. It is especially common amongst troops, being in close contact with each other in tent or barrack accommodation.

During the winter months from November, 1953, to April, 1954, 185 cases of tonsillitis amongst British soldiers and their wives were admitted for treatment to this hospital—the largest of several in the Canal Zone. Of these, 19 men and one woman were found to have degrees of splenomegaly easily detected by ordinary routine palpation—an incidence of over 10 per cent. The splenomegaly was in all cases checked by at least one and usually two independent observers. Sixteen of the men were under the care of one of us (P. G. C.), while the remainder were kindly referred by colleagues for inclusion in this series.

CLINICAL FINDINGS

The principal clinical findings are summarized in Table I.

The degree of splenic enlargement varied from the just definitely palpable to the moderately enlarged, palpable two to three fingers' breadth below the costal margin.

According to Wintrobe a palpable spleen is not necessarily enlarged, though it is usually taught in this country that if the spleen can be felt at all, it must be enlarged, unless it is displaced. In the present series, the fact that the splenomegaly developed and declined pari passu with the tonsillitis would make any but a casual relationship unlikely.

It must be remembered that in a tropical climate an enlarged spleen is perhaps more conscientiously searched for than in a temperate area.

Only in five cases was there adenopathy apart from tonsillar adenitis; the glands involved were in one or both posterior triangles, but the glands were small and their significance was doubtful.

Seven of the patients had had jaundice in the past, and one (possibly two) had had malaria—both diseases known to cause an enlarged spleen at some stage in the disease.
INVESTIGATIONS

It was hoped to prove that the splenomegaly was, or was not, due to glandular fever by doing a white cell count and a blood film examination about once a week for four to six weeks together with two or three Paul-Bunnell reactions. However, owing to transport difficulties and frequent movement of troops, this ideal could not always be attained.

The white cell count in nearly all cases showed an initial polymorphonuclear leukocytosis, but later in most cases developed no special characteristics. In a few patients there was an absolute lymphocytosis at some stage. In no case were abnormal lymphocytes seen in significant numbers, although only 72 per cent. of the films were specifically examined for atypical cells. In cases 5, 8 and 18 a few of the lymphocytes appeared suggestive of those seen in glandular fever, but they were less than 1 per cent. of the differential count.

The Paul-Bunnell reaction was negative in every case with no agglutination above a serum dilution of 1:10, except for the second and third specimens of serum from case 2, collected on the 33rd and 80th days after the onset of the sore throat, when the titre was 1:80, and the second specimen, collected on the 11th day, from case 20 when the titre was 1:40. Unfortunately absorption with guinea-pig kidney and ox cells could not be performed.

Throat swabs were taken in six cases and β-haemolytic streptococci were grown from five; in the sixth, Vincent’s organisms were seen on the direct smear.

Blood cultures in six cases were sterile.

The erythrocyte sedimentation rates (E.S.R.) in two cases showed a moderate rise.

The sternal marrow examined during the first admission of case 11 was normal.

TREATMENT

Apart from gargles three times a day and intramuscular penicillin for four or five days, no treatment was given and the results were satisfactory.

DISCUSSION

The clinical picture of tonsillitis, splenomegaly, and in a few cases cervical lymphadenopathy, is rather suggestive of the anginose type of glandular fever, but we feel that these cases are not this condition. Clinically the response to treatment is too rapid, and during the period covered by this series there were only three cases of glandular fever admitted to this hospital. Pathologically the Paul-Bunnell titre does not rise high enough to be significant, nor are there enough Downey cells of any type on which to make a diagnosis of glandular fever. The culturing of β-haemolytic streptococci from five out of six cases is more indicative of this condition being a primary tonsillar infection rather than glandular fever in which the tonsils appear to become secondarily invaded with Vincent’s organisms.

The age and sex distribution, though similar to that of the sporadic form
TABLE I

<table>
<thead>
<tr>
<th>Case No.</th>
<th>Age</th>
<th>Sex</th>
<th>Duration of sore throat before admission (days)</th>
<th>Previous attacks of tonsillitis</th>
<th>Past history</th>
<th>Severity of tonsillitis</th>
<th>Duration of splenomegaly in days after admission</th>
<th>Degree of splenomegaly</th>
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<tr>
<td>1</td>
<td>19</td>
<td>M.</td>
<td>3</td>
<td>Nil</td>
<td>J aet 18</td>
<td>A</td>
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<td>M.</td>
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<td>Nil</td>
<td>B</td>
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<td>5</td>
<td>19</td>
<td>M.</td>
<td>2</td>
<td>1</td>
<td>J aet 14</td>
<td>A</td>
<td>3</td>
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<tr>
<td>6</td>
<td>30</td>
<td>M.</td>
<td>3</td>
<td>3</td>
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<td>B</td>
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<td>1</td>
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<td>J aet 12</td>
<td>A</td>
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<tr>
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</table>

**LEGEND TO TABLE I**

Grades of tonsillitis:
- **A**—Tonsillar enlargement (frequently gross) with many purulent follicular exudates and tender tonsillar glands.
- **B**—Tonsillar enlargement less marked than **A**, fewer inflamed follicles, and less adenitis.
- **C**—Mild injection of the fauces and pharynx only, with tender tonsillar adenitis.

Grades of splenomegaly:
- 3—Palpable without inspiration.
- 2—Palpable on quiet respiration.
- 1—Palpable on maximal inspiration.

*These cases had mild and transient enlargement of the posterior cervical glands.

of glandular fever, is really a reflection of the selected population served by this hospital. All the cases in this small series have been British, but since this paper was begun similar cases with normal haematology and serology have been seen in a 21-year-old Mauritian and in a Greek aged 18.

The splenomegaly might possibly be an unrelated coincident finding and many causes of splenic enlargement are known. The previous history of jaundice or malaria has been mentioned; septicæmic conditions can be virtually excluded by the negative blood cultures and by the rapid clinical recovery. Splenomegaly is a frequent finding in cases of "P.U.O.—Short
Tonsillitis and Splenomegaly

Term” seen in the Canal Zone, but, as mentioned earlier, the fact that the splenic enlargement and the tonsillitis progress and regress together indicates that they are in some way connected and are not unrelated findings.

The probable connection between the tonsillitis and the splenic enlargement is the removal or neutralization of absorbed streptococcal toxins by the spleen as the main organ in the reticulo-endothelial system. We think that this may occur more frequently than is realized in normal cases of tonsillitis, though a thorough search through the Index Medicus has failed to reveal any references to this combination of signs.

SUMMARY

A series of twenty cases of typical tonsillitis is presented, in which splenomegaly was a feature. Glandular fever can be discounted in all cases on cytological and serological evidence. The cause of the splenomegaly is suggested.

ACKNOWLEDGMENTS

We should like to thank Colonel J. A. G. Carmichael, Consulting Physician, M.E.L.F., who suggested this investigation; Lieut.-Colonel P. H. Shorthouse and his successor as O.C. Medical Division, Lieut.-Colonel R. G. Macfarlane, for their encouragement; Captain G. Eisinger, for the Paul-Bunnell tests; and other colleagues who have helped by examining or referring patients.

REFERENCE

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J R Army Med Corps 1955 101: 231-234
doi: 10.1136/jramc-101-03-09

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