RECURRENT INFECTIONS OF THE THROAT AND UPPER RESPIRATORY INFECTIONS OF CHILDREN BY SULPHONAMIDES

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SUMMARY: A retrospective survey was made of 100 children referred for adenotonsillectomy. In those in which the only symptom was recurrent sore throats, their incidence was reduced in 85 per cent of children so that surgery was not required, and in 66 per cent when there were nasal or aural symptoms in addition. It is suggested that sulphonamide should be more widely used as a prophylactic in the waiting period for tonsillectomy and should be considered as an alternative to operation. It is hoped that this is a preliminary to a more prolonged trial, comparing the effectiveness of sulphonamide with tonsillectomy and a placebo.

Introduction

The proposition that tonsillectomy is an effective treatment of recurrent sore throats in children has become more and more questionable. The emphasis has shifted from sore throats to the treatment of deafness, but even so the operation remains one of the most common surgical procedures.

A recent controlled survey by Mawson, Adlington and Evans (1967) of 404 children showed that over a two year period the actual number of sore throats prevented was a little less than half a sore throat (Annotation, 1967), if the sore throat induced by the operation itself was included. However, few otolaryngologists offer any alternative treatment to the operation except antibiotic treatment of the acute episode. Sulphonamides have been used for prolonged periods as a prophylactic and were shown by Burke (1956) to reduce the incidence of sore throats.

In the present study a retrospective survey was made of 100 children between the ages of two years and eleven years referred for adenotonsillectomy or adenoidectomy to the British Military Hospital, Singapore in 1964-1965.

Methods

Audiometry was routine for all children attending the Department of Otolaryngology and no children with a hearing loss of twenty-five decibels or over were included as their treatment was primarily aimed at overcoming the hearing loss. The children were divided into four groups for treatment, according to the findings of the preceding clinical examination and investigations.

These are as follows:—Group I, sore throats fewer than one every three months. Group II, sore throats more than one every three months. Group III, nasal or aural symptoms with Group II symptoms. Group IV, nasal or aural symptoms alone.

The number of children in each group and their treatment is shown in Table I.

The sulphonamide used routinely was sulphadimidine in a daily single dose of 0.25 g for children aged two years to four years, 0.5 g for ages four years to eight years, and 1.0 g for those over eight years. It was continued for a period of three to six months. In some cases sulphadiazine was used owing to supply factors. Previously sulphamethoxy-

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Table I  
Number of children in each group and their treatment

<table>
<thead>
<tr>
<th>Group</th>
<th>No. of patients</th>
<th>Medicinal Treatment</th>
<th>Surgical Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>20</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td>II</td>
<td>37</td>
<td>Sulphonamide 31</td>
<td>Adenotonsillectomy 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sulphonamide and</td>
<td>Adenotonsillectomy only 3</td>
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<tr>
<td></td>
<td></td>
<td>Phenergan 3</td>
<td></td>
</tr>
<tr>
<td>III</td>
<td>28</td>
<td>Sulphonamide 16</td>
<td>Adenotonsillectomy subsequent to sulphonamide 9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sulphonamide and</td>
<td>Adenotonsillectomy and antral washout 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Phenergan 11</td>
<td></td>
</tr>
<tr>
<td>IV</td>
<td>15</td>
<td>Phenergan alone 14</td>
<td>Adenoidectomy and antral puncture 1</td>
</tr>
</tbody>
</table>

pyridazine had been used, but was abandoned owing to reports of fatalities from the Stevens-Johnson syndrome. Phenergan was combined with sulphonamide or used alone, as an oral vasoconstrictor of the nasal mucosal vessels. If the child developed an acute tonsillitis the sulphonamide was continued together with penicillin.

Results

Medical treatment in Group II failed in five cases (15 per cent), and was successful in twenty-nine (85 per cent), so that no operation was required and their symptoms were controlled by sulphonamide alone. However, three were unsuitable for medical treatment; one because of sensitivity to sulphonamide and two who would have been impossible to follow-up.

In Group III there was a failure of medical treatment in nine (33½ per cent) of twenty-seven cases and was successful in eighteen (66½ per cent), in whom no surgery was required owing to control of their symptoms by sulphonamide, either alone or combined with Phenergan. One was not treated medically owing to the findings of opaque antra.

In Group IV, only one child was submitted to surgery owing to the finding of an opaque antrum.

Thus, of 100 children referred for consideration of adenotonsillectomy, sixty-one were treated medically, nineteen surgically, and twenty were given no treatment.

Discussion

The follow-up period averaged nine months and in the absence of controls the most that can be deduced from these figures is that the sulphonamide therapy shows sufficient promise to require a controlled trial as an alternative treatment to tonsillectomy in recurrent sore throats of children. It is hoped to arrange such a trial in the near future. However, Burke's findings of a reduction in the incidence of sore throats over a relatively short period of time was supported by this survey. This is particularly important in children on waiting lists for tonsillectomy for whom there is a tendency by both general practitioners and otolaryngologist to feel that their respective responsi-
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...ilities have been discharged; in the meantime the child misses a considerable amount of schooling over a period, varying from months to years. These children should be placed on prophylactic sulphonamide during this period, and further evidence may show that this treatment can replace tonsillectomy in most children suffering from recurrent sore throats.

The findings of recent surveys have shown that the benefit of tonsillectomy is mainly in the twelve-month period following operation, tending to support this suggestion. Further, Fry (1957) in his survey of children suffering from sore throats showed that the maximum incidence occurs during a relatively short period of the child’s life around six years, so that the condition is self-limiting and this short-term treatment may tide the child over. The present tendency is for a child to spend this period of maximum incidence on a waiting list and have the tonsils removed when the recurrences are becoming fewer. However, more information is required on the subsequent progress of children treated with sulphonamide to discover whether they develop this apparent immunity, described by Fry in the untreated child. It should, however, be emphasised that medical prophylactic treatment should not be undertaken without audiometry in these cases, and radiography of the antra and postnatal space where indicated. All children having a hearing loss of twenty-five decibels or more should be referred to an otolaryngologist for an assessment of the deafness, particularly to exclude serous effusions which are so common a cause of deafness in childhood.

REFERENCES


ACADEMIC ACHIEVEMENTS

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