Clinical Records

Secretory Otitis Media

A Clinical Survey

By N. Shah (London)

During the past 10 years, Otologists have seen increasing numbers of patients with secretory otitis media. Although Archard (1967) says myringotomy is of little value in treatment but could be essential to diagnosis, increasing numbers of myringotomies are being performed at most hospitals for this condition. The number of such procedures performed at The Royal National Throat, Nose and Ear Hospital has risen from 43 in 1962 to 314 in 1966 (Table 1).

Table I.

Year	Number of Myringotomies
1962	43
1963	82
1964	227
1965	278
1966	314

There is considerable difference of opinion regarding the management of secretory otitis media. The treatments advocated have included: myringotomies (Carter, 1963); indwelling polythene tubes (Senturia, 1963); multiple incisions (Harrison, 1963); tympanotomy (Mawson, 1964), and retrograde insufflation (Kapur, 1964). Most surgeons appear to concentrate on the upper respiratory tract and do little to the ear except a myringotomy.

Social problems such as poor school progress and deafness occurring during the management of such cases seemed to warrant a critical and constant follow-up of these patients carried out at one centre, where large numbers of cases can be examined and critically evaluated.

It is the purpose of this paper to report clinical and audiometric follow-up of 95 cases diagnosed as having secretory otitis media and who have been treated at The Royal National Throat, Nose and Ear Hospital between March 1965, and April 1966.

Method

The series consists mainly of children, under the age of 11, with bilateral secretory otitis media who were proved, by myringotomy, to have fluid in the middle ear cleft. These patients were first seen at routine Out-patients, and medical treatment was left to the individual surgeons. All children were subse-

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quently seen in a special follow-up clinic and separate records were kept of detailed history, clinical examinations and special investigations, including skin sensitivity tests. Particular attention was paid to the appearance of the drum-head.

Post-operative audiograms were repeated after 1 month and at varied occasions between 3–12 months. All but four have been followed up for more than 12 months. Hearing loss is given as the average loss for frequencies of 500, 1,000 and 2,000 c.p.s. Children with a hearing loss of 15 db. are considered as being within normal limits. Hearing losses of 20 db. are considered as deaf. During this follow-up period, a few of the children required further treatment, and this was arranged after consultation with the surgeon in charge of the case.

The majority of these children were from London (two-thirds) and the Home Counties, coming from all social classes. Two children were from the West Indies, two from India, one from Cyprus and the rest from the Greater London area.

About one-third (35) of these children had some E.N.T. operation performed prior to hospital attendance (Table II).

TABLE II.

Operation	Number of cases
Adenoidectomy	8
Adenoidectomy and antral lavage	3
Tonsillectomy and adenoidectomy	24

Results

In this series of 95 cases, ages ranged from 3 to 14 years. The actual age distribution is shown in Fig. 1.

Sex distribution was equal—48 males—47 females. Although most of the children were of school age, all but four were brought to the hospital by their parents, primarily due to deafness. The hearing loss is shown in Fig. 2.

Surprisingly only 14 children have done badly at school. The presenting symptoms are shown in Fig. 3.

The appearance of the tympanic membrane, seen at the time of operation, is shown in Table III.

TABLE III.

Side	Retracted	Dull-grey	Pink	Hair-line
R	21	55	13	6
L	23	46	22	4

It is of interest that the majority of tympanic membranes showed a dull grey appearance with reduced mobility. There was no close relationship between the type of fluid in the middle ear and the appearance of the tympanic membrane. The type of fluid aspirated is shown in Table IV.

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TABLE IV.

Side	Serous	Mucoid	Purulent	"Glue"
R	22	15	3	55
L	24	21	2	48



FIG. 1.

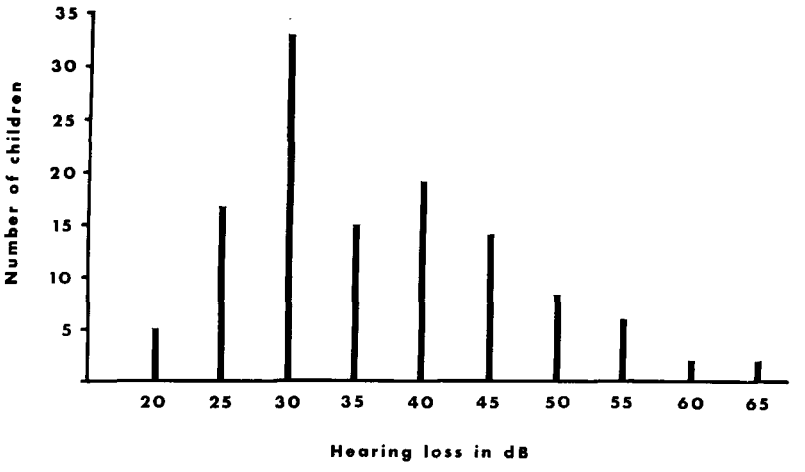


FIG. 2.

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FIG. 3.
Presenting symptoms of series.

Five children had positive skin sensitivity tests and were treated with oral antihistamines.

Treatment has varied according to the practices of individual surgeons. Follow-up has continued in the special clinic as well as in routine Out-patients and results of treatment can be conveniently divided into a number of groups (Table V).

TABLE V.

Group	Treatment	No. of cases	Symptom free
A	Adenoidectomy and myringotomy	58 (61%)	52 (55%)
B	Tonsillectomy, adenoidectomy and myringotomy	17 (18%)	13 (14%)
C	Myringotomy	7 (7%)	7 (7%)
D	Tonsillectomy, adenoidectomy, Rept. myringotomies, and grommet tubes	13 (14%)	9 (10%)

Thirty children in Group A had adenoidectomy and myringotomy as a primary procedure, 3 remain deaf. All of these had a previous history of otitis media and an original hearing loss of more than 30–40 db. Twenty-eight children had revision adenoidectomy and myringotomy, having had their tonsils and/or adenoids removed; of these 3 are deaf, their hearing loss being within 30–40 db.

Seventeen children in Group B had tonsillectomy, adenoidectomy and myringotomy, all having a previous history of tonsillitis and upper respiratory infections with deafness. Four children are still deaf in one or both ears; again the earing losses were more than 40 db.

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Seven children in Group C had only a myringotomy performed, having had their adenoids removed previously; all are symptom free. Hearing losses were within 30–40 db.

Thirteen children in Group D have been unrewarding following treatment, retaining residual deafness. All of them had previously had their tonsils and adenoids removed and myringotomies performed at least twice before insertion of polythene grommet tubes. Four children in this Group are deaf with changes suggestive of adhesive otitis in the middle ears.

Three children developed otitis media during the survey, following the surgical treatment. Two had myringotomies and the third had grommet tubes inserted in the tympanic membrane. All of them responded to antibiotics without any residual hearing loss and the grommet tube was removed. The average period of grommet tube stay-in has been 4–6 months.

Discussion

It is difficult to provide a full picture of the effects and comparative results of various lines of treatment of secretory otitis media unless prospective studies and a survey are made lasting at least 10 years.

The majority of children in this survey were of school age but only four were referred by school medical officers.

There was apparently no relationship between the type of fluid and response to the treatment. In the fourteen (15 per cent.) children in this survey who remain deaf—six had glue ears, six serous fluid, and two the mucous variety.

There is definite evidence that those children who have had previous attacks of middle-ear infections and original hearing losses of more than 40 db. are less likely to recover completely.

Summary

A survey has been carried out on 95 cases of secretory otitis media in school-age children from the London area, seen and treated at The Royal National Throat, Nose and Ear Hospital. Nearly all were followed up with audiometry for over 12 months, following a variety of surgical treatments.

Deafness has been the primary cause for seeking advice and the majority of tympanic membranes showed dull-grey appearance. Type of fluid aspirated has been "glue", serous, and mucoid, in decreasing numbers.

Acknowledgments

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