

CLINICAL NOTES

ACUTE OTITIS MEDIA

A survey of 400 cases

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ACUTE OTITIS MEDIA IS ESSENTIALLY a disease of general practice and almost all cases are seen and treated by general practitioners who are thus best able to assess the effect of treatment. A leading article (*Brit. med. J.* 1958) commenting on the Medical Research Council report expressed a wish for a further survey using routine penicillin.

In the series of 400 cases reported here, no attempt was made to select cases. Over a period of three and a half years, all patients who presented with acute otitis media were recorded and followed up by myself and one of my partners (Dr R. D. C. Hart).

Figure 1 shows that this is a disease of childhood (92 per cent) the main period of risk being when the child comes into close contact with upper respiratory infections on entering school and dropping to a low level after the age of 16 (8 per cent).

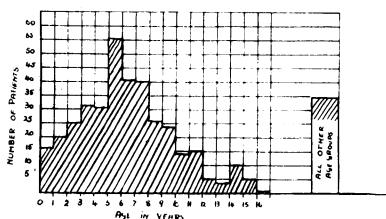


Figure 1.

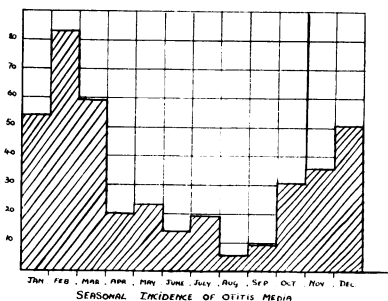


Figure 2.

The time of year has a considerable influence on the incidence of the disease (figure 2), the winter months, with their great increase in respiratory infections, produce the greatest incidence of otitis media.

Approximately 50 per cent (196) patients had had previous attacks of otitis media whereas in 204 cases this was their first attack (figure 3). There was no appreciable sex difference (203 males, 197 females)—equally there was no difference in which ear was affected (left 164, right 173); 63 cases were bilateral. Fifty-seven patients (14 per cent) had already had adenoidectomy and in most cases also tonsillectomy performed.

Diagnosis

Usually this is not difficult; pain was the usual presenting feature—not

always associated with pyrexia, especially in adults. Discharge was the presenting symptom in 107 cases (26 per cent) occurring most frequently in those below two years old and in the five to eight age group. In the majority, the otitis media was superimposed on an existing upper respiratory infection but in 65 (16 per cent) it appeared to be a primary condition with no other clinical signs of upper respiratory infection.

The posterosuperior portion of the drum was usually the first part to show inflammatory signs, often with considerable bulging; yet, in those presenting with discharge, the perforation was nearly always in the anterior portion, usually inferior. Superficial bullae were observed on the drum in seven cases.

Treatment

This divided itself into two phases, the treatment of the acute infection and the treatment of the residual deafness.

For the treatment of the acute infection my partner and I assumed that the quicker the inflammatory damage in the middle ear could be stopped, the less risk of permanent damage—accordingly all cases were treated with oral penicillin 125 mg four-hourly for children and 250 mg for those aged above 12; this was given for a week and continued, if considered necessary. Where the infection was considered to be severe penicillin G. 1 mega unit was given i.m. as a loading dose. Soluble aspirin was used to ease pain and terramycin or otosporin ear drops were used in those with discharging ears, after instructing the mother to mop out the ear before using them. No ear drops were used in those with an intact drum.

Treatment for the residual deafness consisted of:

- (1) $\frac{1}{2}$ per cent ephedrine nose drops.
- (2) Instruction in Valsalva's manoeuvre and in some cases a 'blower toy' for children.
- (3) Inflation with Politzer's bottle: this was done in 38 cases with considerable success.
- (4) Further investigation to exclude chronic sinus infection. Five had their sinuses x-rayed; three patients were found to have infected antra and treated accordingly.

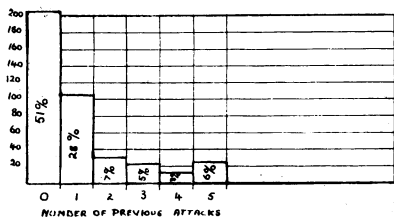


Figure 3.

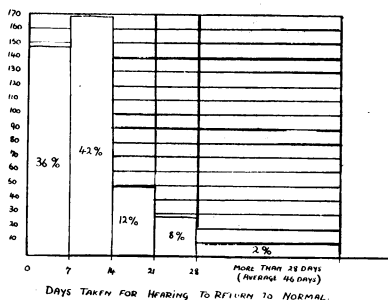


Figure 4.

No case was considered to have been cured until the drum appeared

normal and the hearing to soft whispered voice was ten feet or the equivalent in smaller children with N.I.D. cards. For those too young to co-operate the mother's opinion was taken. Hearing was rechecked after a month to ensure that there had been no relapse.

Results of treatment (figure 4)

In general it was most impressive how quickly the acute symptoms subsided—usually within 24 hours of commencing therapy and in a considerable proportion of cases (36 per cent) the hearing had returned to normal in a week or less. The majority of patients (78 per cent) had normal hearing after 14 days. However a significant group took a long time to regain normal hearing, the longest being 60 days. This is important to remember in school children, and most of these required inflation, often repeated, to overcome Eustachian obstruction.

Twenty-two patients (5 per cent) had recurrences of otitis media after penicillin therapy the intervals varying from three weeks to 19 months, the drums of five patients perforated whilst on treatment but in each case the drum was bulging badly at the onset, and perforation was expected. One patient who developed meningeal irritation but no mastoid tenderness was admitted to hospital, and subsided quickly on large doses of crystalline penicillin by injection. One patient developed definite mastoid tenderness but subsided at home after substituting injections for oral penicillin, however the hearing took 42 days to return to normal. One patient, with no previous history of otitis media, failed to respond, gradually proceeding to cholesteatosis for which cold mastoidectomy had to be performed. Two patients developed 'glue ear' with failure of hearing to return to normal and were referred for aspiration—they had no further recurrences.

Thirteen patients who had recurrent otitis media were referred for adenoidectomy and in all except one this was done. It may only be coincidence, but none of them had any further attacks during the period of the survey.

Conclusion

The findings do not vary significantly from the M.R.C. report of 1955 in which the age incidence, seasonal variation and number of patients, who had had previous attacks, were all about the same. My impression is that the disease is as prevalent as it was, but the use of penicillin relieves the symptoms extremely rapidly. During the survey it became obvious that an anatomically normal drum did not necessarily mean normal hearing; and that the use of Politzer's bottle in the surgery is a valuable and easy way to overcome obstructive deafness in many patients.

Excluding the case of cholesteatosis, (which is considered to be a congenital defect and not a complication of otitis media), no patient developed chronic otitis media, or permanent hearing loss.

REFERENCE

Brit. med. J. (1958) Editorial. 1, 328.