

Histology of aural polyp as a predictor of middle ear disease activity

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Abstract

This study compares the histology of aural polyp with the subsequent clinical course of the middle ear disease. All cases of aural polyps that presented to the department during 1988 and 1989 were included. Patients who had previous ear surgery were excluded as were cases where the operation was part of clearance of known cholesteatoma rather than polypectomy alone.

We found that the histology of the aural polyp was not a precise predictor of the presence or absence of cholesteatoma, nor of the subsequent course of the middle ear disease.

Introduction

Most Otolaryngologists do not rely on the histology of an aural polyp as a guide to middle ear disease activity, save on rare occasions when malignancy is suspected.

Rhys Williams *et al.*, (1989) in their report on the management of aural polyp found that the duration of symptoms, size of polyp, degree of conductive hearing loss and bacteriology of otorrhoea were unhelpful as predictors of the underlying cholesteatomatous disease.

Milroy *et al.* (1989) in a retrospective study examined aural polyps and related the histology to the presence or absence of cholesteatoma underlying the polyp. They produced a scoring system to help surgeons decide whether surgical exploration of the mastoid was required.

The purpose of this study was to compare the histology of aural polyps with the subsequent clinical course of the ear disease.

Materials and methods

We studied all cases of aural polyp that presented to the department during 1988 and 1989. The polyps were removed under general anaesthesia. The polyps were fixed in formalin and the sections stained with haematoxylin and eosin.

If the operation was part of a clearance of known cholesteatoma rather than polypectomy alone the material was excluded from study. Patients who had had previous ear surgery were also excluded. Fifteen polyps were removed from 14 patients.

Results

Of the 15 cases, ten polyps were histologically simple with no evidence of keratin. However, four of these proved to have cholesteatomatous disease requiring mastoid surgery and one was shown to be a case of nec-

rotizing otitis externa. Five polyps contained keratin but only two of these required mastoid surgery, the other three remaining dry and clean.

As regards disease activity with or without the presence of histological cholesteatoma; seven of the 15 required mastoid surgery and three of these did not have cholesteatoma. Of the eight cases that did not require mastoid surgery three had been shown to contain keratin on histology.

Discussion

There is a paucity of literature on aural polyp. Aural polypectomy facilitates drainage of the ear and allows for better assessment of the extent of middle ear disease. Whether this procedure inactivates the ear, thereby avoiding a more radical procedure to eradicate the disease is controversial.

Milroy *et al.* (1989) found that polyps containing keratin flakes and raw granulation tissue had a 70–80 per cent probability of having an underlying cholesteatoma whereas polyps composed of fibrous core covered with epithelium and containing glands and lymphoid aggregation did not. Their result indicated that histological examination of aural polyp can be used to give a prediction of the presence or absence of underlying cholesteatoma.

These results were not obtained in our study. Of the ten polyps that were histologically simple with no evidence of keratin, four proved to have cholesteatomatous disease requiring mastoid surgery.

Veitch *et al.* (1988) reviewed patients with active chronic otitis media who had undergone an aural polypectomy and assessed the proportion that subsequently became inactive. They found a low success rate (33 per cent) in creating a dry ear in patients who had no previous surgery for chronic otitis media, unlike aural polypectomy associated with an open mastoid cavity which was successful in 72 per cent of their cases. They

felt that it was difficult to justify aural polypectomy in previously unoperated ears under general anaesthesia without carrying out a more formal exploration at the same time.

However, Rhys Williams *et al.* (1989) found that 58.3 per cent of their cases became inactive after aural polypectomy. This increased to 72.7 per cent if only the tubotympanic group was included. The result for their attic-antral group was 50 per cent. The authors felt that aural polypectomy was sufficient to render the majority of ears dry thereby avoiding more extensive and unnecessary procedures.

In our study, the clinical course of the middle ear disease after aural polypectomy was not related to the presence or absence of cholesteatoma, in that seven out of the 15 cases required subsequent mastoid surgery and three of these had active but non-cholesteatomatous disease.

It would seem that in the absence of neoplasia, the presence of aural polyp signifies active middle ear disease. It is the persistence of this activity rather than the histology of the aural polyp that determines the subsequent course of the disease.

Key words: Otitis media, suppurative; Cholesteatoma

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