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Audit

Is a community-based mastoid microsuction service feasible: the audit of a pilot project

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Abstract
Patients who have had a mastoidectomy form a considerable long-term follow-up commitment to their local ENT Department. A community-based mastoid aural toilet pilot project run by a GP is described using an operating microscope and suction apparatus in his surgery. To obtain the necessary information about community treatment, an audit was performed of all mastoidectomy patients from a large general practice in Portsmouth: 57 mastoidectomy patients were reviewed. During the project it was possible to transfer to the community microsuction project the long-term care of most of their mastoidectomy patients who were attending the hospital ENT outpatient clinic.

Key words: Mastoid, surgery; Community health services

Introduction

The transfer of patients' clinical ENT care from the hospital to the community is an attractive idea for both patients and otolaryngologists.

The ENT Department in Queen Alexandra Hospital, Portsmouth performs about 120 mastoidectomy operations each year (Harkness *et al.*, 1995) and these patients will require on average two outpatient follow-up appointments annually long-term. We have calculated that with a 50 per cent dropout rate on outpatient follow-up, that about 1200 outpatient appointments will be required annually solely for mastoidectomy patients.

The pilot project reported here was performed to assess whether the care of some of these patients could be transferred from the hospital ENT Department to a community-based microsuction service. The results were obtained by performing an audit of all the mastoidectomy patients from one large general practice in Portsmouth.

Method

One of the authors (C.H.L.) has been a GP in Portsmouth and a clinical assistant in ENT for 13 years and the other author (A.R.) is a Consultant ENT surgeon at Queen Alexandra Hospital, Cosham, Portsmouth.

The Fratton Road Practice was founded over a century ago. It has about 10 000 patients (mainly social class 3–5) living on Portsea Island in an inner-city densely-populated environment.

Every patient's clinical record has a summary sheet in the front of the notes. Each set of notes was examined to identify any patient who had had a mastoidectomy (cortical and modified radical) in the past: 61 patients were identified and all were invited to attend the surgery for review. Ninety-three per cent of these patients attended.

The Portsmouth Health Commission funded the purchase of a Storz-Urban operating microscope (£7800), suction apparatus (£270) and appropriate surgical instruments (£210) for aural toilet for the author (C.H.L.) to use in his surgery. The total capital set-up cost for this equipment was £8280.

On attendance, every patient's past ENT history and current symptoms were recorded. Each ear and mastoid cavity was examined with the operating microscope and the results recorded. An infected ear was treated with microsuction and ear drops. If this failed to resolve or there were signs of active middle ear disease, the patient was referred to one of the local Consultant ENT surgeons.

A record was made of all patients who were under current ENT outpatient follow-up. If their ears were dry and stable and surgery performed more than one year previously, their care was transferred to the GP (C.H.L.) for follow-up in the community. The follow-

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TABLE I
OPERATED EAR

	No. of patients	% of patients
Right	25	44
Left	23	40
Bilateral	9	16

up arrangements had previously been agreed with all four local Consultant ENT surgeons.

Mastoidectomy patients were recalled using a computer for further appointments to the community project.

Results

The mastoidectomy patients were examined during the period August to December 1993: 61 patients were identified (a practice prevalence rate of 6.1/1000 patients). Fifty-seven of the patients attended for review (93 per cent) with a male to female ratio of 30:27. The patients' mean average age was 56.6 years and the average age at the time of the initial mastoidecomy was 28.4 years.

Sixty-six mastoidectomies in 57 patients were performed: 39 of the operations were modified radical procedures, 25 were cortical mastoidectomies and in two patients the operation type was not stated (Table I).

At the initial review 22 mastoidectomy patients were attending the ENT outpatient clinic and 35 were not under follow-up.

Patients under hospital follow-up care

Of 22 patients under hospital follow-up (Figure 1) 15 had had non-recent surgery, with a dry, stable ear. Their care was transferred to their GP (C.H.L.) who continued to review them regularly at the community microsuction base in his surgery.

Two of the patients whose care had been transferred to the community developed otorrhoea which failed to resolve with microsuction and a further consultant opinion was obtained. They were found to have safe, stable ears which become infected on occasion. They were seen once only at

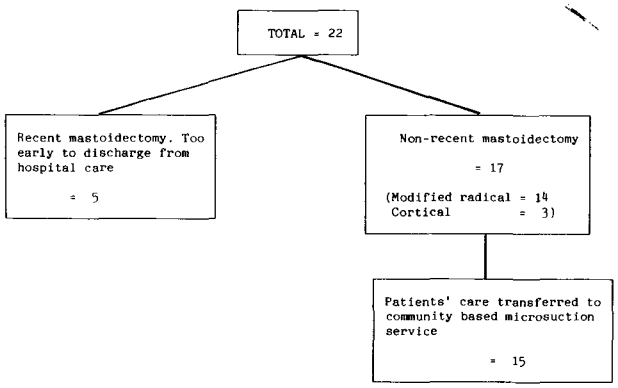

FIG. 1
Summary of patients under hospital follow-up.

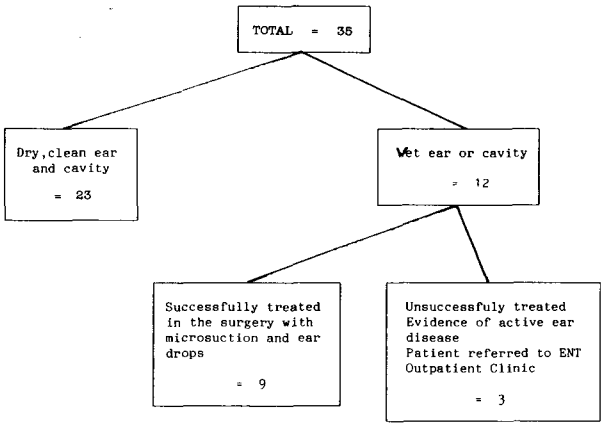

FIG. 2
Summary of patients not under hospital follow-up.

the hospital and their care was then re-transferred to their GP (C.H.L.).

The authors estimate about 39 outpatient appointments were saved in 1993/94 following the transfer of the 15 patients' care to the community microsuction service.

Patients not under hospital follow-up

There were 35 patients not under hospital review and in most of these patients the surgery had been performed many years earlier (Figure 2). The authors were especially interested in assessing whether there was evidence of active disease in this group of patients.

In 12 patients (34 per cent) the ear or cavity was infected but this resolved in nine patients with microsuction and topical ear drops.

The three patients referred to the ENT outpatient clinic have now been assessed and their outcome is shown in Table II.

Do mastoidectomy patients require regular follow-up?

It was clear that not all the mastoidectomy patients required long-term follow-up. Only eight patients (Table III) of the 35 who were not under hospital follow-up were deemed to require regular review and microsuction (three at the hospital following referral and five in the community).

Discussion

The philosophy of the project

There has been an increasing emphasis recently on the transfer of clinical care from the hospital to the community.

TABLE II
OUTCOME OF PATIENTS WITH EVIDENCE OF MIDDLE EAR DISEASE REFERRED TO THE OUTPATIENT CLINIC

Mastoidectomy for cholesteatoma	= 2
Patient moved to another practice: outcome unknown	= 1

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TABLE III
PATIENTS REQUIRING REGULAR FOLLOW-UP

	Total no. of patients	% of patients requiring aural toilet
Patients remaining under care of local ENT Department	10*	100
Patients transferred from ENT Department to community microsuction service	15	93
Patients with no recent local ENT outpatient attendance	32†	16

*This represents recent mastoidectomies (five), non-recent mastoidectomy patients not transferred to the community project (two) and patients who were not initially under hospital follow-up, but who showed evidence of active ear disease and were referred (three).
†These patients were only asked to attend for regular aural toilet if the cavity or external canal required cleaning at the assessment visit.

Otolaryngological patients who have had a past mastoidectomy, form a considerable long-term follow-up commitment for their local outpatient department. It would seem logical to try and transfer some of this work to the community to be performed by suitably equipped, trained and financed GPs.

This pilot project was performed to see whether this idea was feasible. It was limited to the patients from one general practice who had mastoid surgery.

The project has been successful in transferring long-term outpatient attenders back to the community, and in identifying patients not under hospital care who had unstable ears. It was also popular with patients.

The main benefits

Of the 57 patients who attended for assessment, 35 had no recent ENT outpatient attendance. In this group even those patients who had mastoid cavities did not necessarily need regular follow-up by the GP if the cavity and ear was dry and clean.

Understandably all patients attending the hospital ENT outpatient clinic and almost all the patients transferred from the hospital to the GP's care required regular mastoid follow-up for aural toilet.

The project was successful in transferring care to the community. However, new patients were also referred to the ENT outpatient clinic as a consequence of a review of all mastoidectomy patients. Active disease was discovered in three patients who had not attended the hospital for several years.

The authors believe that the project has allowed expensive outpatient care to be focused more appropriately on those patients who need expert assessment and intervention.

It is estimated that 39 outpatient appointments were saved in 1993/94 following the transfer of 15 patients' care to the community microsuction service.

Cost implications

The total capital set-up cost of £8280 was provided by Portsmouth and S.E. Hampshire Health Commission from their Primary Care Development Project Fund.

The cost of an ENT outpatient appointment in Portsmouth is £51. The GP was paid a 'minor operation' fee of £25 by the Health Commission for each microsuction treatment performed on any patient whose care had been transferred from the outpatient clinic to the community service.

Once a patient's care has been transferred, the community clinic is responsible for administering the follow-up and recall arrangements. These administration costs together with those for insurance and servicing of equipment were paid by the GP from the minor operations fees received.

Training general practitioners to use the operating microscope

Many ENT outpatient departments employ GP clinical assistants and most departments possess an outpatient operating microscope. The authors believe that training suitable GPs to use an operating microscope under supervision in the outpatient department should be feasible. The authors also believe that with experience, a GP clinical assistant should be able to recognize an active, unstable ear.

Population size requirements

A community microsuction would need to serve a sufficiently large population or catchment area to be viable. A densely-populated inner-city environment would seem to be very suitable for this service.

It is not yet possible to define the ideal population size required to support a community clinic but on Portsea Island (population 150 000) the authors estimate that eventually up to 250 patients' care may be suitable for transfer from the ENT outpatient clinic to a community service.

Conclusions

We were unable to find any published work covering the feasibility of community follow-up for mastoidectomy patients. Also it does appear that the use of the operating microscope in general practice in the UK has not been attempted previously.

We did not experience any medical or organiza-

tional problems in running this pilot project. The patients appreciated the shorter journey for treatment, greater flexibility over appointment times and less waiting.

In consequence, the ENT Department at Queen Alexandra Hospital and the GP (C.H.L.) have now enlarged the community project to treat mastoidectomy patients from other general practices on Portsea Island and 45 patients' care has now been transferred from the outpatient clinic to the community service. This is being funded by the Portsmouth Health Commission.

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Reference

Harkness, T., Brown, P., Fowler, S., Grant, H., Ryan, R., Topham, J. (1995) Mastoidectomy audit - results of the Royal College of Surgeons of England comparative audit of ENT surgery. *Clinical Otolaryngology* **20:** 89–94.

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