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Temporal bones for dissection. A diminishing asset?

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Abstract
In this prospective study, the author studied four local ENT departments to discover how many temporal bones were being harvested. The results show that only eight per cent of routine post mortems have temporal bones removed.

Key words: Temporal bone; Autopsy

Introduction

The use of cadaveric material for medical education and research is a well established practice. ENT surgeons use temporal bones in order to study the complex surgical anatomy of this region. In addition, histological examination of temporal bones provides otologists with information about ear pathology (Michaels *et al.*, 1983).

The established method of obtaining this material is by requesting a temporal bone harvest from the mortuary technician who will remove the bones after post mortem examinations. With the decline in the number of post mortem examination being performed nationally, this important source of medical education is threatened.

It is intended to determine the number of temporal bones harvests that were undertaken from hospital post mortems thereby assessing the demand placed upon the pathology departments by ENT surgeons. In this way, we could ascertain if this resource was being adequately utilized.

Materials and methods

A prospective study over a three-month period was undertaken. Four hospitals were included in the study, each one had an ENT department associated with it. Data were collected by interviewing the mortuary technicians on a weekly basis. The number of post mortems performed each week was recorded. In each instance, the technician was asked if temporal bones had been removed. The study terminated when 100 post mortems had been recorded.

Results

Twenty-eight post mortems were excluded from the study as they were coroners' cases and material cannot be removed from them. Of the remaining 72 routine post mortems only six (eight per cent) had temporal bones removed ($p<0.01$, χ_2 test).

The figures for each individual hospital are recorded below in Table I.

There was no statistical difference in the proportion of temporal bone harvests between each hospital ($p>0.1$ χ_2 test).

Discussion

It is recognized that this is a very limited study and therefore too many conclusions cannot be drawn from it.

However, the survey has shown that temporal bones are not regularly harvested in the four hospitals included in the study. The majority of routine post mortem examinations (>90 per cent) are carried out without any harvest of specimens. This is not an efficient use of restricted resources.

Each hospital was comparable in terms of the number of ENT trainees within each department namely four SHO's and three Higher Surgical Trainees. Unfortunately, the study did not quote how many requests were made by each individual trainee.

There are two possible explanations for why temporal bones are not regularly removed in these

TABLE I
NUMBER OF TEMPORAL BONES HARVESTED

Hospital	Temporal bones harvested	Total number of post mortems performed
A	0	26
B	2	17
C	2	18
D	2	11
Total	6	72

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hospitals. Firstly, they are infrequently requested by the trainees and, whenever they are ordered, the mortuary technician is unable to remove the specimens. This arises when the relative of the deceased has not given authority to have specimens removed for research, because the post mortem request form has been incompletely filled in. This information was gleaned from the mortuary attendants. As post mortems are declining in number, we feel that temporal bones should be regularly harvested. They can easily be stored and therefore a bank of specimens can be accessed as and when required (Natarajan and Baxter, 1994).

In addition, ENT trainees should educate their medical and surgical colleagues to complete the post mortem request forms correctly thereby allowing bone harvests to occur.

Although temporal bone removal courses are a well established entity, the authors feel that every surgical trainee in ENT surgery should have an ongoing supervised temporal bone dissection. It is important to study the complex anatomy of the petrous temporal bone and understand the principles and practice of otological surgery, and temporal bones offer us a way to achieve this.

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