

# RE-ADMISSION TO HOSPITAL FOLLOWING POST-TONSILLAR COMPLICATIONS

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## ABSTRACT

This poster presentation represents the findings of a 12 month audit within the ENT and Maxillo-facial Surgery department at Monklands Hospital, Airdrie, Lanarkshire, Scotland. The audit was conducted to answer several questions, the main one being that there was a perceived high rate of returns with re-admissions to hospital following ENT surgery. This was important not only in terms of quality of care for the patient but also in the organisation of care which included a proposal to perform tonsillectomies as day case surgery. Re-admission following surgery is one of a number of indicators used to measure outcomes within the department.

Also at this time the Scottish Intercollegiate Guidelines Network (SIGN), Guideline No.34 had been issued and the department was discussing the compliance to and implementation of this guideline. The main data tool used was a self designed Audit Proforma.

The Proforma recorded data on four main areas, Original surgical team, Original treatment, hospital where treatment was performed and reasons for Re-admission. The Proforma was tested in a short pilot study to check for face validity by the main users.

To check data validity a retrospective search was done of hospital SMR 1 data covering the audit period. This provided information of all multiple admissions to the department within the criteria of the study. The definition used for Re-admission was "a second admission to the department within fourteen days of the first". A matching process was undertaken between the two data sets. An Access database was constructed by the Clinical Audit Department to facilitate data management and analysis.

## AUDIT PROFORMA

Post-Operative Re-admissions.

Date

Patients Name

Address

Unit No

Consultant

Surgeon

Original operation

Date

Original Admission Date

Original Discharge Date

Reason for Re-admission

Treatment

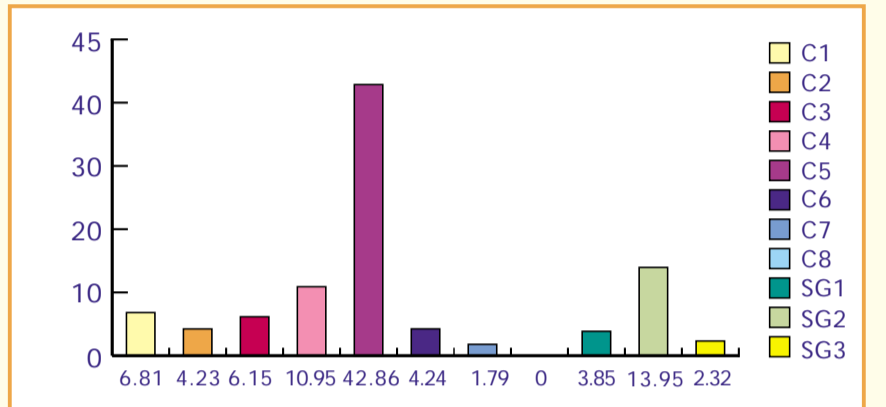
Discharge Date

## SIGN GUIDELINES



## RETURNS AS PERCENTAGE BY OPERATIONS CARRIED OUT

Here we see the returns as a % of the total operations that each surgeon carried out, as indicated previously some surgeons carried out over 100 tonsil and adeno-tonsillectomies and some carried less than 20 of this type of operation. In some cases it is seen that those who perform a greater number of this type of operation have less problems than those who do not undertake as many, in other cases this is not the case and may require some investigation. On the whole this may suggest that those who do little in the way of tonsil and adeno-tonsillectomy surgery, as their skills are more refined in other areas of ENT surgery, may find it more prudent to pass those cases that are referred to them to their more experienced colleagues.



## SOCIO-ECONOMIC IMPACT

As a service designed to deliver a holistic level of care to its patients we must also take into account the problems which are encountered by our patients and their families due to their re-admission to hospital. On inspection, the average age of re-admission was noted to be 22.6 years. This surprisingly mature age for re-admissions poses some important questions such as; Do they have children? And if so, Do they have a partner who can care for their children whilst they are incapacitated? If not, Do they have extended family support that they can rely on? Or Do they have access to childcare services and can they afford this? Are they the main carer for an elderly or disabled relative? If so can they arrange care for them at short notice? If not what else can we do to help them? Can the Social Services arrange emergency respite or home-care? Apart from personal costs there are also the wider costs to industry to take into account. Are they in employment? Does this extra episode of hospitalisation jeopardise their job? How many workdays are lost to industry and at what cost to both the employee and the employer?

### What cost to the NHS?

According to the results of the audit the patients who were re-admitted stayed in ward for an extra 1.9 days, multiply this by the 52 patients who were re-admitted we get a total of 100 extra days when these beds are not available for admitting into. The approximate cost of a bed for the night in the NHS in Scotland is £200.00, multiply this by the 100 extra bed days and you have a grand total of £20,000.00 before the cost of any treatment is added. Other unseen costs to the service may be that some elective surgery patients could be cancelled due to the beds being blocked which in turn increases the waiting list for surgery. Some patients may be discharged too early to accommodate the admission of elective surgery patients only to be re-admitted to the unit 6.3 days later perpetuating the never ending saga of re-admission.

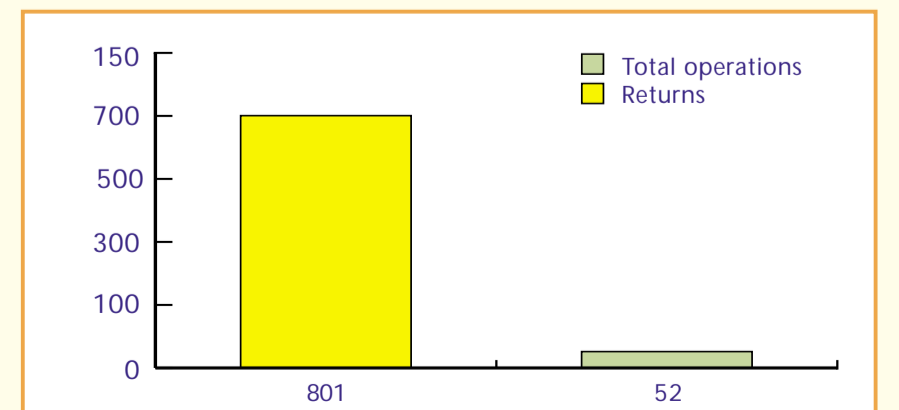
The final questions, which we must ask ourselves are, What can be done to reduce the re-admission rate? And are we going to have some degree of re-admissions no matter what we do? Could prophylactic antibiotic cover and/or the use of more appropriate analgesia or a combination of analgesia alleviate or somewhat reduce the problems that we have encountered.

## OPERATION RETURN

During the twelve month period which the Audit covered a grand total of 801 Tonsillectomies and Adeno-tonsillectomies were carried out. This was from an area covering a population of approximately 600,000.

A total of 52 patients were re-admitted to the unit following this type of surgery within the two week criteria window.

This group comprised 6.5% of all patients undergoing tonsil surgery within the department.

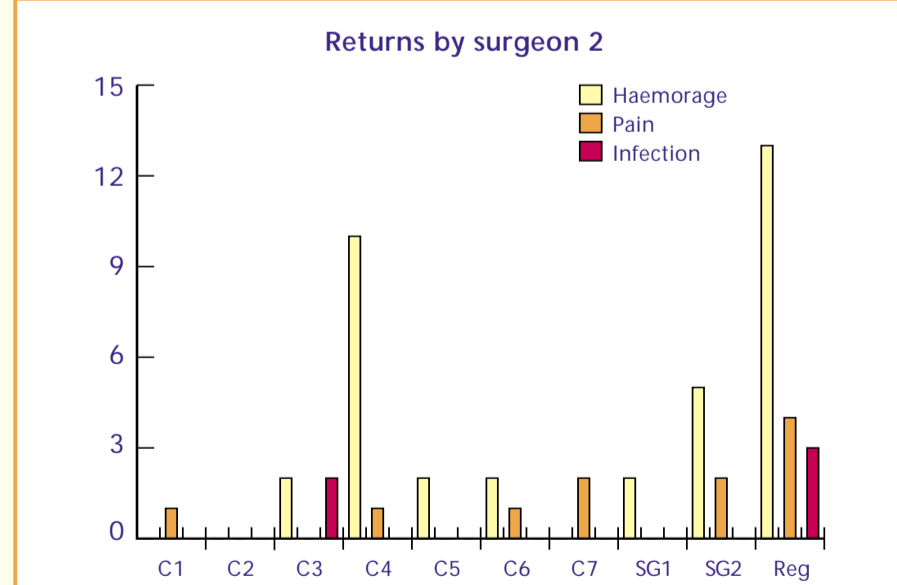
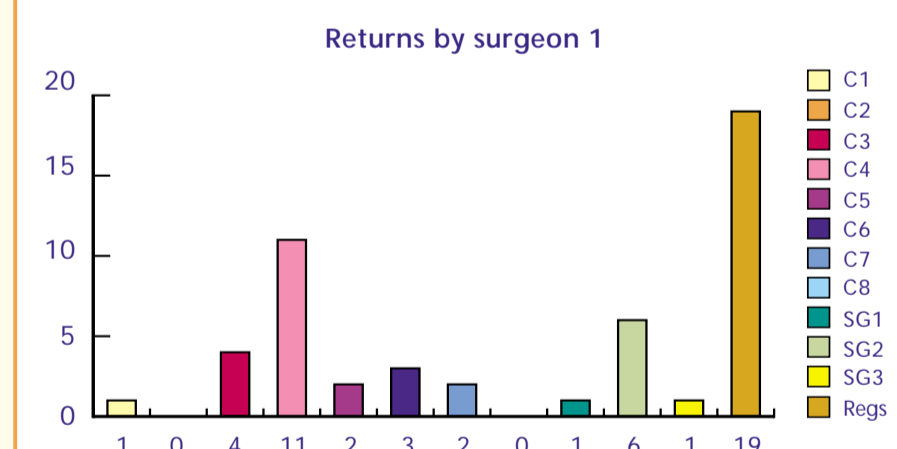
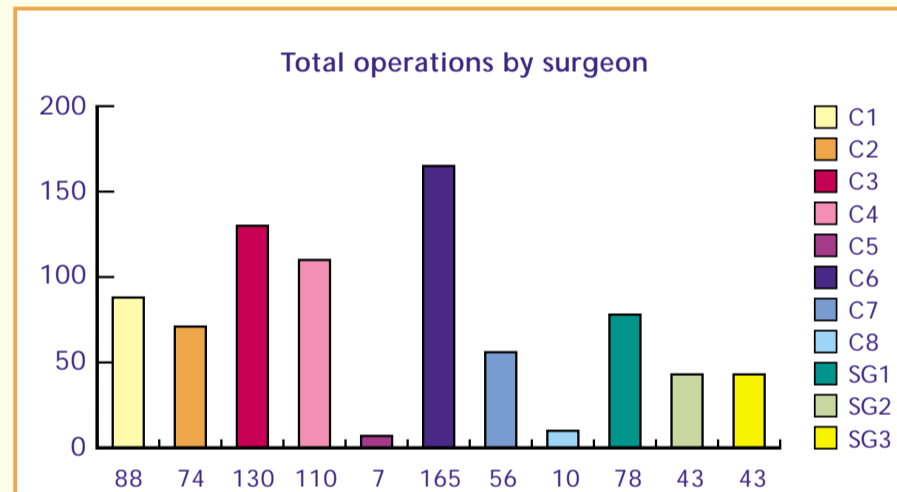


The results of the audit, when compared with previous studies, (Kendrick & Gribben, 1993), indicate that we could very probably perform day case tonsillectomies within the unit.

## TOTAL OPERATIONS BY SURGEON

The total number of tonsillectomies carried out on each surgeon's theatre list is clearly shown here and, when compared with the number of returns for these surgeons a clearer picture of the problematic areas is seen. For example surgeon C5 only performed seven tonsillectomies or adeno-tonsillectomies on his theatre list but produced a personal return rate of 43% with 3 of the patients from this list returning with post-tonsillar problems. This naturally includes those operations carried out by Registrars, who in the absence of the surgeon responsible would take over the operating list on that day.

When we correlate these figures along with the % returns for each surgeon a clearer picture emerges.



Consultant	Total number of tonsillectomies carried out (n=801)	% of total carried out	Re-admissions (n=50)	% of patients re-admitted
C5	7	0.87	3	42.86
SG1	43	5.37	6	13.95
C3	130	16.23	8	6.15
C1	88	10.99	6	6.81
C2	71	8.86	3	4.23
SG2	78	9.74	3	4.23
SG3	43	5.37	1	2.32
C7	56	6.99	1	1.79
C4	110	13.73	12	10.92
C6	165	20.6	7	4.24
C8	10	1.25	0	0

## RETURNS BY SURGEON 1

Surgery during the audit period was carried out by a total of 8 Consultants, 3 staff grades and various registrars. The graph shows the re-admissions by grade of staff operating.

A closer look at the results show that of the 35 patients who returned complaining of post tonsillar haemorrhage, between them they had been operated on by 3 Consultants, 3 Staff Grades and various Registrars. Over the 12 month period a total of 4 Registrars worked in the unit.

The 11 patients who returned complaining of excessive pain had been operated on by 2 Consultants, an Associate Specialist, 3 Staff Grades and the same various Registrars, and the 6 patients who returned with a post tonsillar infection had been operated on by a Consultant and the various registrars previously mentioned.

## RETURNS BY SURGEON 2

Here we have a graphical picture of the total number of patients who returned to the unit following this type of surgery. This is laid out in terms of which surgeon performed the surgery and incorporates all three returns types, ie, Haemorrhage, pain and infection.

## RETURNS IN RELATION TO OPERATIONS CARRIED OUT

The relationship between the patients who are returning and the Consultants on whose list the operations were carried out on is easily seen in this chart.

The chart also shows the relationship mentioned above as a percentage of both of the total operations carried out and that of those Re-admitted. Only seven of the eleven surgeons who were involved in the study managed to keep their return within the 6.5% figure produced by the audit. These seven ranged from 0% at one end of the scale to 6.15% at the other end.

The remaining results ranged from 6.81% to 42.86%