A SCOTTISH PROSPECTIVE AUDIT OF TONSIL AND ADENOID SURGERY WITH DISPOSABLE SURGICAL INSTRUMENTS

FINAL REPORT

SUMMARY

Grant-holder:

Brian Bingham
Consultant ENT Surgeon and Audit Convenor, Scottish Otolaryngology Society
Department of Otolaryngology
Victoria Infirmary
Langside Road
GLASGOW G 42, 9TY

Tel: 0141 201 5478
E-mail: BJGBingham@aol.com or brian.bingham@ggc.scot.nhs.uk

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Introduction

The Scottish Prospective Audit of Tonsil and Adenoid Surgery with Disposable Surgical Instruments was carried out between 2002 and 2005. The main purpose of the audit was to ensure that adenotonsillectomy surgery was being performed safely in Scotland.

The prospective audit followed on from an earlier retrospective audit, conducted in 2000-2001, which was undertaken in response to concerns about the safety of tonsillectomy surgery following the introduction of single use (disposable) surgical instruments. These single use instruments were introduced to prevent the potential transmission of the prion that produces variant Creutzfeldt-Jakob disease (vCJD). Early reports of excessive bleeding and one death associated with single use instruments were given to the Department of Health in England and led subsequently (in December 2001) to all routine tonsil and adenoid surgery in Scotland being stopped pending investigation. Bleeding following surgery (either immediately or after the patient has returned home) is the most common complication of this type of surgery and affects around 2% of patients.

The retrospective audit undertaken in Scotland looked at data from two time periods, July to December 2000 and July to December 2001. During the former period, only reusable instruments were used, during the latter period only disposable instruments were used. The audit concluded that there had not been a significant increase in complications following the introduction of disposable instruments for adenotonsillectomy in Scotland and, as a result, routine surgery recommenced in March 2002.

The prospective audit which is the focus of this report was conducted in order to assess the safety of adenotonsillar surgery in Scotland over a longer period of time. The audit was not designed to show differences in outcomes between different surgical techniques.

All NHS and private hospitals in Scotland conducting adenotonsillar surgery participated in the prospective audit and all adults and children undergoing this type of surgery were included. The main aim was to assess how many patients suffered from complications following surgery and whether these occurred whilst the patient was still in hospital or after their return home. Detailed information, for example about the type of surgical technique used, was only collected for cases where complications arose.

Results

A total of 14,530 patients were included in the audit over a three year period. Six hundred and forty-four (4.43%) suffered some sort of complication following surgery. This rate was almost the same as that found during the retrospective audit of surgery in 2000 (when reusable instruments were in use), when complications arose in 4.64% of patients.

Of the 644 patients with complications, 53 developed complications within the first 24 hours after surgery, of whom 40 had to return to the operating theatre to secure a bleeding
point. In the majority of cases (87%), complications arose within 6-8 hours of the surgery taking place.

A total of 619 patients were readmitted to hospital within 28 days of surgery taking place with bleeding from the tonsil bed being the most common reason for a readmission (292, 72.6%, of the 402 cases for whom information was available followed by pain (51 cases, 12.7%). Of the 619 readmissions, 88 (14%) had to return to the operating room to secure a bleeding point in the tonsil bed. The majority of problems arose within the first 10 days after surgery, with a peak at day 6.

Of the 619 patients who were readmitted, 87 (14%) were readmitted to a different hospital from the one that carried out their initial surgery.

A small number of patients (18 out of 14, 530) required a blood transfusion following surgery.

**Key Recommendations**

- Tonsillectomy audit data should be collected, presented and reported locally on a continuous basis with regular collation of local reports on a national basis, eg, to the Chief Medical Officer or NHS QIS.

- The number of complications arising more than 6 hours after surgery and the type of surgical techniques used are very important considerations if day-case surgery is considered. This is particularly important as the techniques favoured by surgeons undertaking tonsillectomy on a day-case basis may be associated with higher complication rates.

- The audit did not assess individual surgical techniques and their associated complication rates and this is an area that warrants further study,

- Further research is required regarding post-operative pain relief and the impact of alcohol consumption on the rate of bleeding following discharge from hospital.

**Conclusions**

The results of the audit showed that there was no significant increase in the number of complications following the introduction of disposable (single use) instruments and they therefore support the continued use of disposable instruments.