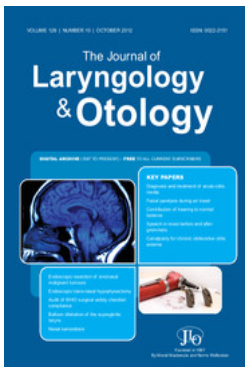

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ENT Comparative Audit Meeting

Royal College of Surgeons of England, London

Short Papers from the meeting 17th September, 1998

The short papers

These papers have been chosen as they have demonstrated the audit process – as opposed to research – which implies an examination of current practice with the introduction of a change to improve that practice. Preferably they will demonstrate completion of at least one if not more audit cycles.

Audit is thus the continuing process of an upward spiral of rising standards (Vasanthakumar and Brown, 1992) whereby practice is evaluated and compared to a previously decided standard, and if outcome is found wanting a change of practice is introduced and further evaluation made, or the standards can be raised and so on (Figure 1). The Royal College of Surgeons (Eng.) has produced a booklet 'Guidelines to Clinical Audit in Surgical Practice' which is available from the College.

Audit is not an easy substitute for research, and may actually take longer than research to demonstrate that practice has risen up the spiral, or conversely that a practice does not meet standards and should be dropped – an equally valid conclusion. It is also important to distinguish between the different aims of audit and research, and these are outlined in Table I. Some projects can fulfil the aims of both, and whether they are accepted as research or audit will depend upon how they are presented.

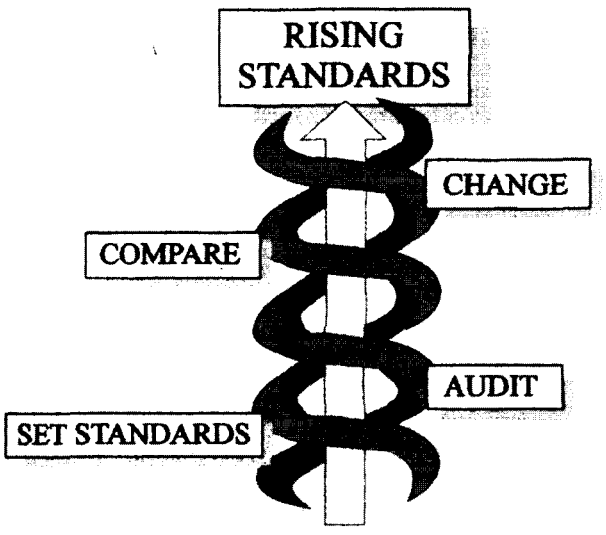

FIG. 1
Audit – continuing process of an upward spiral of rising standards.

TABLE I

Research	Audit
1. Studies new treatments	Evaluates current practices and outcomes
2. May establish new standards of practice	Assesses whether new standards are being achieved
3. Experimental	Observational
4. Assessment of medical technology	Assessment of quality of clinical care

The future for audit in the UK

This is the year of the government paper 'A First Class Service – quality in the NHS', and next year sees the introduction of its main innovation, 'Clinical Governance'. Clinical Governance in the wake of the Bristol case will require a sound data base for national Comparative Audit, and strong evidence based medicine, both of which are generally lacking at the present time.

Since 1991 the ENT section of Royal College of Surgeons (Eng.) Comparative Audit Service has been conducting audits of practice throughout England and Wales. We are now able to re-audit practice some years later to monitor how this is changing, and have built up a considerable amount of data on mean success rates and complication rates for many operations in England and Wales. However one weakness of the present system is that participation in the audits is not compulsory, so that we could be regarded as an unrepresentative self selected group of enthusiasts. Secondly there has been no funding to validate the accuracy of data returns. The commitment of the new CMO to *Clinical Governance may provide the opportunity* to correct both these shortcomings and considerably strengthen the comparative audit process.

Peter M. Brown F.R.C.S. (Eng.),F.R.C.S. (Ed.).
ENT Clinical Audit Co-ordinator for Royal College of Surgeons (Eng.) Comparative Audit Service.

References

Vasanthakumar, V., Brown, P. M. (1992) Audit spiral. *Quality in Health Care* **2:** 142–143.

The following papers were presented

An Audit of Fine Needle Aspiration Biopsy for Head and Neck Lesions the Ninewells Experience

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Introduction

Fine needle aspiration (FNA) is a recognized method of obtaining material for cytological diagnosis in a fast, safe and reliable way. Reports worldwide suggest that dedicated training is required for both surgeons and pathologists to attain an adequate level of proficiency in obtaining satisfactory specimens, and in the subsequent pathological interpretation.

We have carried out an audit of fine needle aspiration for head and neck lesions within the Otolaryngology department at Ninewells Teaching Hospital, Dundee, with a view to improving our standards.

Objectives

(1) To assess and improve our hit rate; increase the number of samples of sufficient quality to yield some form of diagnosis (adequate specimens).

(2) To assess and improve our accuracy and reliability for diagnosis of malignancies; a comparison of diagnosis made by FNA against the final clinical and/or histological diagnosis (sensitivity/specificity).

First cycle

Standards were set following a review of the relevant literature. Then all FNAs performed in the department between September 1993 to December 1996 were reviewed retrospectively and our performance evaluated. Change was then instituted.

Standard

Hit rates for head and neck lesions in other studies: 86–91 per cent (Schwarz *et al.*, 1990; Kocjan, 1991; Roland *et al.*, 1993). Range of sensitivity of FNA for malignant head and neck lesions: 88-100 per cent (Stevenson *et al.*, 1989; Schwarz *et al.*, 1990; Jayaram *et al.*, 1994). Specificity ranged between 52–98 per cent. These results were all obtained in dedicated FNA clinics.

Evaluation

A total of 293 FNAs had been carried out on 231 patients. The hit rate was 65 per cent, with sensitivity and specificity rates for malignant tumours being 56 per cent and 98.8 per cent respectively.

Change of practice

Subsequent discussion and liaison with the pathology department culminated in an intense training session for otolaryngology medical staff, and the setting up, in February 1997, of a dedicated FNA clinic session for one hour, once a week. The clinic was run by a head and neck specialist with Otolaryngology trainees rotating through it. The slides were read by dedicated cytology staff.

Second cycle

Between January 1997 to March 1998 a total of 165 FNAs were performed on 124 patients. Sixty-nine of these were carried out in the FNA clinic. The hit rate outside the FNA clinic was 66 per cent and the sensitivity for malignancies was 79 per cent. The FNA clinic hit rate was 81 per cent and sensitivity was 100 per cent. Both results for the FNA clinic showed a significant improvement when compared with the initial evaluation $0.01>p>0.001$. The FNA clinic specificity rate for malignant tumours was 84 per cent. This showed no significant difference from the previous result.

Conclusion

Our audit shows that co-operation between clinicians and pathologists, improved training, and dedicated FNA sessions/clinics can make FNA an even more effective and reliable diagnostic tool.

Future third cycle

We are in the process of persuading all our clinicians to send all patients who need fine needle biopsies to the FNA clinic, and indeed hope to expand this facility in the future. We intend to complete the audit loop again.

References

Jayaram, G., Verma, A. K., Sood, M., Khurana, N. (1994) Fine needle aspiration cytology of salivary gland lesions. *Journal of Oral Pathology Medicine* **23(6):** 256–261.

Kocjan, G. (1991) Evaluation of the cost effectiveness of establishing a fine needle aspiration cytology clinic in a hospital out-patient department. *Cytopathology* **2(1):** 130–138.

Roland, N. J., Caslin, A. W., Smith, P. A., Turnbull, L. S., Panarese, A., Jones, A. S. (1993) Fine needle aspiration cytology of salivary gland lesions reported immediately in a head and neck clinic. *Journal of Laryngology and Otology* **107(11):** 1025–1028.

Schwarz, R., Chan, N. H., MacFarlane, J. K. (1990) Fine needle aspiration cytology in the evaluation of head and neck masses. *American Journal of Surgery* **159(5):** 482–485.

Stevenson, D. S., Allison, R. S., Robertson, M. S., Hamer, J. W. (1989) Aspiration cytology in the diagnosis of head and neck masses: the early Christchurch experience. *New Zealand Medical Journal* **102(881):** 639–641.

Can Critical Analysis of the Quality of CT Sinus Requests Improve Practice?

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From the Department of Otolaryngology, Derbyshire Royal Infirmary, Derby, UK.

Objective

Computerized tomographic (CT) scanning of the paranasal sinuses is only appropriate in rhinosinusitis when medical therapy has failed and endoscopic sinus surgery is planned as the next treatment modality (White *et al.*, 1996). Our aim was to establish whether our practice met this standard.

Methodology

Case records for 50 consecutive CT requests reviewed.

Standard

Based on a published gold standard (White *et al.*, 1996) we set three targets. All patients to undergo (1) clinic nasal endoscopy and (2) four weeks of hospital prescribed medical therapy (defined locally as systemic antibiotics and topical nasal steroid). (3) Eighty per cent to be listed for functional endoscopic sinus surgery (FESS).

Evaluation

(Sample n = 46) 78 per cent had clinic nasal endoscopy, 83 per cent had received nasal steroids and 37 per cent systemic antibiotic therapy. Fifty per cent had been listed for FESS.

Comparison

Failed standard for all three targets.

Changes in practice

Guidelines issued stating all patients should receive treatment as in standard above, and agree to FESS if the scan is supportive.

Re-evaluation

(Sample n = 45) 95 per cent had nasal endoscopy, 75 per cent received nasal steroids and 33 per cent systemic antibiotic therapy. Fifty-five per cent had been listed for FESS.

Comparison

Diagnostic endoscopy approaching standard but failed other targets.

Changes in practice

Improve compliance by education and improved awareness, possibly augment guidelines.

References

White, P. S., Maclennan, A. C., Connolly, A. A. P., Crowther, J. (1996) Analysis of CT scanning referrals for chronic rhinosinusitis. *Journal of Laryngology and Otology* **110:** 641–643.

An Audit of the Appropriateness of Referral to a Direct Access Audiology Service

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Introduction

The Royal National Institute for the Deaf (RNID) proposed in 1988 that patients could be referred directly by their general practitioner (GP) to community-based audiologists for provision of a hearing aid, instead of first having to refer them to an otolaryngologist.

A direct referral hearing aid service was instituted at Lewisham hospital in October 1993. A protocol was sent to the region's GPs defining the criteria which needed to be met for the referral of suitable patients for this service.

Purpose of audit

To evaluate the number of direct referrals made in accordance with the previously mentioned criteria. To introduce changes in the referral system in order to improve the rate of appropriate referrals.

First cycle (July 1994–June 1995)

We received 266 direct access referrals for hearing aid provision of which 77 (28.9 per cent) did not meet the established criteria. Seven patients (2.6 per cent) did not attend for either initial assessment or hearing aid fitting.

Standards

We set our standard at 80 per cent of appropriate referrals.

Change of practice

In an effort to improve the proportion of appropriate referrals, a letter was sent to the region's GPs in June 1995 with a Direct Access Referral form, requesting that all referrals be made on the form.

Second cycle (July 1995–June 1996)

We received 339 direct access referrals for hearing aid provision of which 147 (43.4 per cent) were made in the appropriate referral form and 192 (56.6 per cent) were not. The referral criteria were not met in 59 cases (17.4 per cent). Eight patients (2.35 per cent) did not attend for either initial assessment or hearing aid fitting.

Change of practice

In October 1996, a further attempt was made to improve the proportion of appropriate referrals by again requesting the referrals to be made on the revised Direct Access Referral form, explaining that any patients referred without it would be sent the form to be completed by their GP. An option for direct referral to an otolaryngologist was introduced for patients failing to meet the criteria following assessment by our audiologist.

Third cycle (October 1996–January 1998)

We received 387 direct access referrals for hearing aid provision of which 287 (74.2 per cent) were made in the appropriate referral form and 100 (25.8 per cent) were not. The patients referred without a referral form were sent a form to be completed by their GP. All the 100 forms (100 per cent) were completed and returned. The referral criteria were not met in 74 (19.1 per cent) cases. Five patients (1.3 per cent) did not attend for either initial assessment or hearing aid fitting.

Conclusions

The introduction of a direct access referral form significantly improves the rate of appropriate referrals for hearing aid provision by a direct access audiology service. Facilitating a direct referral to an otolaryngologist should the patient fail to meet the criteria may have a detrimental effect on the rate of appropriate referrals.

The Aural Toilet Clinic, An Audit of Clinical Care

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Purpose of the audit

The aural toilet clinic (ATC) is a clinic run by trained nurses offering a service to patients who would otherwise be added to the out-patient waiting list. Since its inception in 1926, the workload of this clinic has gradually increased, however its practice has never been audited. In addition in these changing times, its place in the otolaryngology department has often been questioned.

Method

This is a retrospective audit carried out between November 1993 and October 1994, and repeated retrospectively between March 1996 and February 1997.

First cycle

Standard

As there are no published standards for such a clinic, we set out the following standards: (1) Frequency of attendance: Not more than three visits per year per patient in 85 per cent of cases. (2) Case mix: Patients with mastoid cavities and otitis externa. (3) Time needed per visit: fifteen minutes per patient.

Evaluation

Eight hundred and sixty three patients attended this clinic in the initial period audited. Patients had separate out-patient files and ATC files which is unacceptable. Of the patients, 60.5 per cent attended up to three times in the period studied but 10.6 per cent attended more than 10 times; 65.1 per cent of patients attended for aural toilet of mastoid cavities and 20.85 per cent for otitis externa. Surprisingly 15.3 per cent of attendees had tympanic membrane perforations; 47.7 per cent of patients required more than 15 minutes per visit.

Change of practice

Patients must have one set of notes only. We set a protocol to have all frequent attendees (more than three per year), and all patients with tympanic membrane perforations, seen by an otologist to decide their long-term management, with the aim to reduce the percentage of frequent attendees to 15 per cent. We accept that some patients do require more than 15 minutes per visit.

Second cycle

Evaluation

All patients records are now combined. Six hunded and eleven patients were seen in this period, of these 83.13 per cent attended for mastoid cavity toilet, 16.55 per cent were treated for otitis externa and only 0.28 per cent were patients with tympanic membrane perforations. Time required per visit did not alter.

Conclusion and future plans

The ATC is an integral part of the otolaryngology clinic and we intend to utilize it for teaching junior trainees the use of the operating microscope, in addition to continuing up the audit spiral to further improve practice. We have also produced a patient information sheet for the aural toilet clinic.

The Laryngeal Mask for Paediatric Tonsillectomy: A Surgical Audit

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From The Royal National Throat, Nose and Ear Hospital, London, UK.

Aim of Audit

The aim of the audit was to evaluate the use of the laryngeal mask airway in paediatric tonsillectomy from a surgical viewpoint. Specifically we aimed to assess selection criteria for successful use of the airway to reduce problems associated with Boyle Davis gag placement, mechanical compromise of the airway due to compression of the laryngeal mask and surgical access to the tonsillar poles.

First cycle

Standard

An internal audit of one anaesthetist's practice had shown that the laryngeal mask was used in 70 per cent of all paediatric tonsillectomies. Further published and internal audited anaesthetic data from our hospital had found four per cent of these patients requiring withdrawal of the laryngeal mask airway to be replaced with an endotracheal tube due to airway obstruction but surgical access was always deemed to be adequate.

Change of practice

All paediatric patients had reinforced laryngeal mask airways during tonsillectomy.

Evaluation

The anaesthetist provided data on the type, size and ease of insertion of the laryngeal mask airway (LMA). The surgeon performing the procedure evaluated the airway. A linear analogue scale was used to assess access to the inferior and superior tonsillar poles. Ease of placement of the Boyle Davis gag was noted including any mechanical obstruction caused by compression of the LMA and any subsequent need for a change to an endotracheal tube.

It was found that in 30 per cent of 102 consecutive patients, placement of the Boyle Davis gag was deemed difficult and in 12 per cent there were problems with LMA compression. Access to the superior pole was inadequate in 13 per cent and to the inferior pole in 29 per cent of patients. As a result, 10 patients required the LMA to be changed to an endotracheal tube. Nine of these 10 patients were aged six years or below with an average weight of 21 kg. No gag placement, compression or access problems were noted with the endotracheal tube.

Conclusion

Problems arose with use of the laryngeal mask airway in paediatric tonsillectomy. Boyle Davis gag placement and LMA compression proved troublesome. Access was limited to the inferior tonsillar pole especially. In those patients whose airways needed changing, no problems were encountered with the endotracheal tube. Most of the problems occurred with patients aged six years or under.

Second cycle

Standard

To try and ensure no gag placement or airway problems and improved access to the tonsillar poles for the surgeon.

Change of practice

The airway protocol for the anaesthetist was revised and all patients aged six years or less had an endotracheal tube instead of a laryngeal mask airway inserted.

Evaluation

A further 50 consecutive patients have been evaluated thus far using the same criteria as on the first cycle. Boyle Davis gag placement was deemed difficult in four per cent of patients and airway compression was encountered in only one patient with a LMA inserted. Surgical access to the inferior pole was deemed adequate in all patients six years or younger (with endotracheal tubes) and inadequate in six per cent of patients aged seven years or above (with LMA insertion). No airway changes were required.

Comparison

Surgical access and ease were both improved by using the laryngeal mask airway in children aged seven years or above only.

Conclusion

The laryngeal mask airway is a very useful adjunct for paediatric anaesthesia. In the majority of patients surgical access is not reduced and no problems arise with the shared airway. In patients aged six years or under difficulties do arise and from a surgical viewpoint the endotracheal tube proves to be a more satisfactory airway.

Regular Analgesia and Secondary Haemorrhage in Tonsillectomy – an Audit

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From the Department of Otolaryngology, Kent and Canterbury Hospital, Canterbury, Kent, UK.

Purpose of audit

To assess and improve post-operative pain, secondary haemorrhage rates and patients' satisfaction on adult tonsillectomy.

First cycle

Standard

Lee and Sharp (1996) reported 8.9 per cent secondary tonsillar haemorrhage rate in 291 children, and GP consultation by 60.6 per cent of respondents.

Patient selection

One hundred and thirty seven adult patients had undergone tonsillectomy between May 1995 and August 1996. Questionnaires were sent in September 1996. One hundred questionnaires (73 per cent) were returned.

Results and Comparison

Using a linear analog scale from one to five for pain, 67 per cent complained of levels four or more on day one, 61 per cent at one week and 23 per cent at two weeks after the operations. Fifty-seven per cent attended a doctor during the first two weeks. Secondary haemorrhage rate requiring readmission was eight per cent. Twenty-five per cent took more than two weeks to return to normal eating. Ninety-two per cent felt their throat symptoms had improved. Target met both in secondary haemorrhage and GP/casualty consultation rates.

Change of practice, introduction of protocol

1) Regular post-discharge analgesics.
2) Antibiotics for selected patients.
3) Better patient information.

Second cycle

Standards

Results from the first cycle.

Patient selection

One hundred and fourteen adult patients had undergone tonsillectomy between November 1996 and April 1997. Eighty questionnaires (70 per cent) were returned.

Results

Seventy-eight per cent of respondents were prescribed regular outpatient analgesics. Eighty per cent complained of pain levels four or more on day one, 40 per cent at one week and 14 per cent at two weeks. Forty-three per cent attended a doctor in the first two weeks. The secondary haemorrhage rate dropped to 2.6 per cent. One other patient was

readmitted with dysphagia, 21.5 per cent took more than two weeks to return to normal eating, 87.3 per cent felt their throat symptoms had improved.

Comparison

Failure to meet targets on:
1) pain levels on day one.
2) patients' overall satisfaction.

Protocol of regular post-discharge analgesia only met in 78 per cent of respondents.

Change of practice

1) Regular inpatient analgesics.
2) Improved information sheets.
3) Nursing staff to be more vigilant in ensuring every tonsillectomy patient discharged home on regular analgesics.

Conclusion

Our audit shows that with regular post-operative analgesics, the rate of secondary haemorrhage is reduced. The audit continues.

References

Lee, W. C., Sharp, J. F. (1996) Complications of paediatric tonsillectomy post-discharge. *Journal of Laryngology and Otology* **110(2):** 136–140.