

ENT trainee papers presented at the ENT Scotland Winter Meeting, 21 November 2014, Sterling, Scotland, UK

Has the use of linear incision reduced skin complications in bone-anchored hearing aid implantation surgery?

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Aim

To compare the skin-related complications of the traditional skin flap with a linear incision method of implantation surgery.

Methods

All cases of bone-anchored hearing aid (BAHA) implantation surgery performed by a single surgeon ($n = 117$) were compared over two periods: from 1999 to 2011, when the traditional method of skin flap and soft tissue removal was used (group 1); and from 2012 to 2013, when linear incision without soft tissue removal was used (group 2). All cases were followed up for one year, and complications were recorded for that period. Group 1 comprised 86 patients and group 2 comprised 31.

Results

There were 31 (30 per cent) skin-related complications in group 1 (skin overgrowth = 12, wound infection = 8 and numbness = 1) and 3 (9 per cent) complications in group 2 (wound infection = 3). Analysis using an independent t -test showed the results to be significant ($p = 0.005$; 95 per cent confidence intervals = 0.0800 and 0.4473).

Conclusion

The linear incision without soft tissue removal method for BAHA implantation reduced skin complication rates.

Congenital nasal pyriform aperture stenosis: time for a management protocol

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Introduction

Congenital nasal pyriform aperture stenosis is a rare cause of neonatal upper airway obstruction. We have access to the largest series of congenital nasal pyriform aperture stenosis cases in the UK, with the cases demonstrating the full spectrum of manifestations. This provides an opportunity to create a protocol for assessing and managing this rare condition.

Methods

A retrospective case note review was conducted of 24 patients with all manifestations. The various specialties involved and different management outcomes were examined.

Results

The case notes of all 24 patients were reviewed and all clinical specialties involved in the management were logged. The management routes adopted were surgical or non-surgical. A new classification of congenital nasal pyriform aperture stenosis is proposed, based on computed tomography scan findings, to aid management of these patients.

Conclusion

Congenital nasal pyriform aperture stenosis is a treatable cause of upper airway obstruction. Early recognition is vital for appropriate management. A management protocol for these patients is proposed.

'The ENT man': local evidence-based guidance to improve antibiotic prescribing in ENT emergencies

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Introduction

Infections are the main cause of hospitalisation in ENT emergencies. However, a lack of national standardised guidance for the management of ENT infections generates discrepancies in clinical practice.

Methods

Following the introduction of a regional evidence-based guideline for ENT infections in October 2013, a two-cycle audit of all ENT emergency admissions was performed, in which admissions in January and February 2014 were compared with those in January and February 2013.

Results

In the period January–February 2013, 89 emergency admission patients received 54 prescriptions for antibiotics. Of these, 48 (89 per cent) were for the correct antibiotic, 25 (46 per cent) were for the correct treatment duration and 14 (26 per cent) were for patients who had undergone microbiological testing.

In the period January–February 2014, 111 emergency admission patients received 63 prescriptions for antibiotics. Of these, 61 (97 per cent) were for the correct antibiotic, 56 (89 per cent) were for the correct treatment duration and 38 (60 per cent) were for patients who had undergone microbiological testing.

Conclusion

The provision of a local guideline has improved antibiotic practice for ENT emergencies in our department. Work is ongoing to improve adherence to the guideline and carry out appropriate microbiological sampling.

Can we predict which patients will require emergency admission when receiving radiotherapy or chemoradiotherapy for head and neck cancer?

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Background

Chemoradiotherapy is a commonly used modality in the treatment of head and neck cancer. A significant number of patients are admitted to our unit for support during their treatment.

Aim

To identify the factors associated with risk of admission to hospital for patients undergoing radiotherapy or chemoradiotherapy for head and neck cancer during their treatment.

Methods

Data on all patients diagnosed with head and neck cancer in 2012–2013 inclusive, who underwent primary radiotherapy or chemoradiotherapy ($n = 72$), were collected retrospectively. The factors evaluated included age, sex, performance status, smoking status, alcohol status, social support, tumour staging, co-morbidities and tumour site.

Results

Forty-three per cent of patients ($n = 31$) had at least one unscheduled admission within three months of starting treatment. The mean length of admission was 23 days. Of those admitted, 74 per cent were primarily for analgesia and enteral feeding to manage dysphagia or odynophagia ($n = 23$). Those receiving chemoradiotherapy were more at risk of unscheduled admission compared with those receiving radiotherapy alone ($p = 0.024$). Likewise, those with advanced tumour stage were more likely to be admitted than those with early stage disease ($p = 0.02$). Smokers were more likely than non-smokers to be admitted (odds ratio = 1.53). Excessive alcohol intake, gender, living alone, tumour site and low performance status were not risk factors for admission.

Conclusion

A smoker undergoing chemoradiotherapy for advanced head and neck cancer is more likely to require admission during treatment. This may allow healthcare professionals to inform patients about their risk of admission to hospital during their treatment and may help with service planning.

ENT smartphone apps – a smart choice?

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Introduction

Smartphone downloadable applications ('apps') are increasingly utilised as an invaluable source of health information by patients and healthcare workers. This is the first study to review smartphone apps pertinent to ENT, and to

determine the quality of content and medical professional involvement.

Methods

The Apple app store was searched for the following terms: 'ENT', 'otolaryngology', 'tonsillitis', 'laryngology', 'rhinology', 'otology' and 'head and neck', with or without 'cancer'.

Results

Sixty-seven smartphone apps were identified. Most apps ($n = 50$, 74.6 per cent) were aimed at healthcare workers' ($n = 34$, 50.8 per cent) and patients' ($n = 16$, 23.9 per cent) education. Fourteen apps used interactive graphics to convey information. Clearly stated medical professional involvement was present in 52 per cent of educational apps.

Conclusion

A number of highly innovative ENT apps were identified, with features that may enhance explanations of diagnoses and procedures; one app even allowed the user to perform a 'virtual tonsillectomy'. However, the level of stated medical involvement in app design, combined with the lack of app regulation, remains a concern.

Is infantile laryngomalacia associated with early onset adenotonsillar hypertrophy? A retrospective study

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Introduction

Laryngomalacia has been associated with gastroesophageal reflux, which may cause adenotonsillar hypertrophy leading to early onset obstructive sleep apnoea (OSA). We aimed to assess this proposed relationship, with adenoidectomy performed below the age of four years as our primary endpoint.

Methods

The study included 78 children, seen in the airway clinic at the Glasgow Royal Hospital for Sick Children from September 2009 to August 2010, with a diagnosis of infantile laryngomalacia, for whom 4 years of follow-up data were available. The medical notes of these patients were analysed.

Results

We found a significantly increased incidence of OSA in our cohort of 11.5 per cent, compared to a reported population incidence of 0.7–1.8 per cent ($p < 0.0001$). The rate of adenoidectomy below the age of four years in this sample was 12.8 per cent. We found that children who undergo adenoidectomy are more than four times as likely to also undergo a supraglottoplasty procedure than those who do not (70 per cent vs 16.2 per cent; $p = 0.0008$). The presence of neurodisability was significantly higher in the children who underwent adenoidectomy (40 per cent vs 2.9 per cent; $p = 0.002$).

Conclusion

The outcomes following adenoidectomy with or without tonsillectomy suggest that adenotonsillar hypertrophy was the leading cause of OSA. Our results also support an emerging link between gastroesophageal reflux disease and OSA: although there are a number of causes of adenotonsillar hypertrophy, there was little evidence to suggest that any of the

patients could have developed hypertrophy due to alternative mechanisms. Children with more severe laryngomalacia appear to be at higher risk of developing sleep-disordered breathing symptoms, and are subsequently more likely to require adenoidectomy.

The Aberdeen airway/head and neck high dependency unit

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Introduction

Dedicated surgical high dependency units have been established in the UK for 20 years. Dedicated high dependency units in otolaryngology are uncommon compared to other surgical specialties. We are the first to report the experiences of an otolaryngology high dependency unit in the UK, assessing reason for admission, duration of stay, occupancy rate and need for care escalation.

Methods

A retrospective review was conducted of the Aberdeen airway/head and neck high dependency unit admissions over an 18-month period, between November 2012 and April 2014. In addition, we contacted every UK otolaryngology department by telephone to establish the prevalence of airway/head and neck high dependency units in the country.

Results

A total of 126 patients were admitted to the Aberdeen airway/head and neck high dependency unit during the study period, mainly following surgery and because of airway compromise. Average duration of stay was 2–3 days (range, 1–12 days). The occupancy rate was 31.7 per cent. No patients required care escalation from the ward high dependency unit to the hospital intensive care unit.

Discussion

Airway/head and neck surgery high dependency unit use is sparse; only eight otolaryngology departments in the country were identified as having a dedicated high dependency unit, all of which were in major tertiary centres in large UK cities. The safe care provided in our high dependency unit (in Aberdeen) prevented the need for patients' care to be escalated and permitted earlier discharge from more intensive facilities. This success challenges the need to manage patients (who do not require assisted ventilation) in intensive care units following major head and neck surgery or airway compromise.

Conclusion

The airway/head and neck high dependency unit is safe and cost-effective as its use reduces and averts more costly intensive care unit admissions. All large otolaryngology departments may benefit from such a unit, particularly when sharing such a unit with other, smaller surgical specialties. The high dependency unit also provides an environment for patient care in other aspects of the specialty (e.g. immunotherapy).

Managing salivary gland swellings: should we reconsider our practice?

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Introduction

Assessment of salivary glands is considered collectively when addressing parotid and submandibular glands. We considered whether they should be managed as distinct disease states.

Methods

A retrospective analysis was conducted of patients attending the North Glasgow neck lump clinic.

Results

A total of 4282 patients attended the neck lump clinic from 2006 to 2014. Of these, 465 patients (11 per cent) had salivary gland pathology.

Sixty-nine per cent of parotid swellings had a neoplastic process, with 4 per cent of cases having obstructive pathology. In contrast, 17 per cent of submandibular gland swellings had a neoplastic process, with 57 per cent of cases having a calculus obstruction.

Malignancy was present in 23 out of 163 parotid tumours (8.5 per cent) and in 10 out of 21 submandibular tumours (50 per cent).

Conclusion

We advocate different strategies for managing salivary gland pathologies. Assessment of parotid swelling remains as ultrasound (with or without sampling) and excision. For submandibular swelling, initial ultrasound evaluation should be conducted, and sialoendoscopy (with or without stone retrieval) should be considered for calculus obstruction cases. If there is an intraglandular mass, then careful surgical planning is required with wide local excision (with or without neck dissection), given the high level of suspicion.

Is antibiotic prescribing appropriate for the management of peritonsillar abscess?

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Introduction

Peritonsillar abscess (quinsy) is one of the most common ENT emergencies. In a 2008 survey, 67 per cent of ENT departments reported routinely sending pus for microbiology culture. The commonest culture finding was *Streptococcus pyogenes*. We aimed to evaluate whether current antibiotic protocol is in keeping with the microbiology sensitivities of quinsy aspirates. Our local antibiotic protocol currently advises the use of penicillin only, while previous surveys indicate that combination therapy of penicillin and metronidazole may be indicated.

Methods

The electronic records of microbiology cultures and sensitivities of patients admitted with quinsy between January 2007 and August 2014 were retrospectively reviewed.

Results

A total of 379 cases were identified; 215 cases were recorded as undergoing aspiration of pus. Aspirated pus was sent for culture analysis in only 78 cases (36 per cent). Of the 78 pus aspirates, 56 (79.4 per cent) revealed positive culture results. Streptococcal species were grown in 42 cultures (75 per cent), and were mixed with anaerobes in 22 (39.2 per cent). Of these, 10 (17.9 per cent) were pure anaerobes alone. All anaerobes were sensitive to penicillin and metronidazole.

Conclusion

Although routine quinsy aspirate culture tests are not recommended, our results show that a high number of anaerobe species were cultured. These would not be covered by current antibiotic guidelines. Therefore, we recommend that departments review their local antibiotic prescription guidelines regarding the management of quinsy.

Does the quality-of-life impact of tonsillitis correlate with Scottish Intercollegiate Guidelines Network guideline compliance? An assessment of range and normality

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Aim

To assess the distribution of pre-operative quality-of-life (QoL) scores in adults scheduled for tonsillectomy for compliance with Scottish Intercollegiate Guidelines Network (SIGN) guideline 117.

Methods

Prospective data on the QoL impact of tonsillitis were collected for adults who were scheduled for tonsillectomy, compliant with SIGN guideline 117. The Tonsillectomy Outcome Inventory 14 was employed. Data analysis was performed using SPSS[®] software, version 22.

Results

A total of 145 patients completed the questionnaire. The pre-operative scores ranged from 15 to 70, with a mean score of 45.7 (\pm 9.5 standard deviation). The distribution curve was marginally negatively skewed (-0.464).

Conclusion

Ninety-five per cent of scores lay in the range of 30–65 on the distribution curve. Allowing for the marginal skew, we propose that there is a range of Tonsillectomy Outcome Inventory 14 scores which correlates with SIGN guideline 117 (indications for tonsillectomy), and the questionnaire may be a useful adjunct where compliance is not absolute.