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Accuracy of clinical coding and financial remuneration for endoscopic sinonasal procedures: Multidisciplinary changes through a two cycle quality improvement project

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ABSTRACT

Background

Clinical coding is the process of translating medical terminology into an international syntax familiar to the non-medical staff. Health resource grouping (HRG) is the method to summarize disease diagnosis and procedure into informal units of Hospital Episode Statistics (HES).

Aims

Assess the accuracy of clinical coding in endoscopic sinonasal procedures. Investigate the effect of intervention to improving the accuracy.

Methods

A two-cycle service evaluation including all rhinology patients operated on at a single tertiary centre in the UK in 2017. Each cycle lasted 4 months. The operation notes were reviewed by two clinicians briefed in clinical coding to generate the 'standard' codes template. The 'original' clinical codes assigned and their related HRG retrospectively obtained. A Second cycle piloted the

generated multidisciplinary standard template (MST) to improve accuracy between a rhinology firm who used the template and another who didn't.

Results

45 and 49 procedures were recorded in the 1st and 2nd cycle respectively. From the first cycle, accuracy of original coding was 62%. Of the miscoded procedures 18%, 9% and 11% were over, under and wrongly coded respectively. The inaccuracy in coding resulted in a tariff over-payment of £109.92 per procedure. In the second cycle, streamlining coding procedures significantly improved in the firm who used MST.

Conclusion

There were significant inaccuracies in translation of endoscopic sinonasal procedure into clinical coding. The inaccurate financial remuneration cause constrained on healthcare systems. MST is easy to interpret by clinicians and non-medical staff. It can reduce errors in coding and enable more accurate funding allocation to hospitals.

Streamlining tonsillitis and peritonsillar abscess treatment. The new 4 hour target!

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Introduction

There has been a significant rise in tonsillitis and peritonsillar abscess related admissions and complications. This can be attributable to a substantial reduction in tonsillectomies since the introduction of procedures of limited clinical effectiveness (POLCE). As a result there has been an increasing amount of bed days associated with these common ENT presentations with significant financial burden. Data suggests there have been no net savings as a result of these additional bed days.

Objective

To create, implement and evaluate an evidence based 4 hour treatment bundle for the management of tonsillitis and peritonsillar abscess.

Method

All patients who presented to a large teaching hospital with tonsillitis or peritonsillar abscess over two, one month periods were included, between which the 4 hour treatment bundle was implemented. This treatment

included the use of intravenous fluids, analgesia, antibiotics, corticosteroids, plus needle aspiration in peritonsillar abscess patients. Patients were reassessed on completion of treatment bundle. Outcomes measured were overnight admission and re-admission rates.

Results

Admission rates prior to the introduction of the treatment bundle was 75% with 3 readmissions. Admissions reduced to 25% after the introduction of the treatment bundle and reassessment with no readmissions.

Conclusion

The introduction of a 4 hour treatment bundle safely reduces admission rates of patients with tonsillitis and peritonsillar abscess. This data is being used to introduce an ambulatory day unit on the ward, to further provide a streamlined, safe treatment service to reduce pressure on beds as well as reduce financial burdens associated with patient admissions.

Canalostomy as a surgical approach to local drug delivery into the inner ears of adult and neonatal mice**Guopeng Wang, Jingying Guo, Lu He, Shusheng Gong**

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Objective:

Local delivery of drugs into the inner ear is a promising therapy for inner ear diseases. In this study, we aimed to evaluate the effectiveness and safety of the drug delivery through semicircular canals (canalostomy) in both adult and neonatal mice.

Methods

A fast-green dye or adeno-associated virus serotype 8 with the green fluorescent protein gene (AAV⁸-GFP) was inoculated into the inner ear of mice through canalostomy. Following surgery, animals underwent swim tests and auditory brainstem response (ABR) measurements. Then inner ears were harvested for morphological studies and immunohistochemistry.

Results

The canalostomy facilitated broad distribution of fast-green dye in both cochlea and vestibular end-organs. In mice after AAV⁸-GFP injection, no signs of vestibular dysfunction were found, and there were no changes of ABR thresholds after surgery. Extensive GFP expression and no morphological lesions were detected in the cochlear and vestibular end organs. Robust GFP expression was found in inner hair cells, marginal cells, spiral ganglion neurons, vestibular hair cells, vestibular supporting cells and vestibular ganglion neurons.

Conclusion

Canalostomy is an effective and safe approach to drug delivery into the inner ears of adult and neonatal mice and may be used to treat human inner ear diseases in the future.

Neuroprotective effects of NMDA-Rs blocker on the Auditory Cortex in salicylate-induced tinnitus

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Abstract

Object

To examine the effect of administering NMDA-Rs blocker at different times on the changes of neurochemicals and electrophysiology in the auditory cortex (AC), the center of auditory perception, in a rat tinnitus model induced by salicylate (SS).

Method

This study simultaneously monitored the dynamic change of ascorbate and glutamate in the AC during SS-induced tinnitus and its response to intraperitoneal administration of MK-801 by *in vivo* microdialysis with an online electrochemical system (OECS) and high-performance liquid chromatography (HPLC).

Result

We found that the levels of both ascorbate and glutamate were more significantly suppressed in the groups of

MK-801 given at 30 min pre or post SS injection than the levels in the group of MK-801 given at 60min post SS injection compared with the SS only injection group. Electrophysiological recording performed on the SS-injection animals revealed that the spontaneous firing rate (SFR) of neurons in the AC was dramatically increased. The animals treated with MK-801 showed a significantly attenuation of hyperactivity in AC both in the groups of MK-801 given at 30 min-pre or -post SS injection and 60min-post SS injection.

Conclusion

These findings suggest that NMDA-Rs are involved in the pathological mechanism underlying salicylate-induced tinnitus, and also indicate that therapeutic effects on tinnitus are depend on the administration time of the blocker of NMDA-Rs , which might advance studies on understanding the therapeutic potential of NMDA-Rs antagonist in tinnitus therapy.

Outcomes of Parotidectomy from a single surgeon in a District General Hospital setting

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Abstract

Introduction

80% of all salivary gland tumours occur in parotid. 80% of these are benign pleomorphic or mixed adenomas. Purpose of parotidectomy is to remove abnormal growths in parotid gland. During the procedure the facial nerve is at risk and great care is taken to preserve this.

Aim

To evaluate the outcomes of patients who had surgery under a single surgeon for parotid lumps from April 2004 to Nov. 2018

Methods

A retrospective case notes review of parotid surgeries, by a single surgeon, was performed. Data collected included patient demographics, presentation, radiological and histological investigations, operative findings, outcomes, complications and histopathology.

Results

Between 2004 – 2018, 339 patients underwent parotidectomies. 95.6% of the parotid tumours were benign. 59% of these were pleomorphic adenoma. FNA could accurately confirm diagnosis in 62.5% cases. Temporary facial weakness was noticed in 33% of operated cases. Permanent palsy was seen only in one which was preoperative. Other postoperative complications (seroma, wound infection, Frey's) found in 13% of the studied group.

Conclusion

Outcome rates were comparable with published data. The incidence of postoperative complications is influenced by the pathology, with inflammatory lesions significantly increasing the risk of facial nerve dysfunction and other complications. Overall, the incidence of permanent facial paralysis was less than 1%, but temporary nerve palsy was common at 33%, with most patients regaining normal function within 1 year of the operation. In most cases facial weakness improves to normal or near-normal levels within 6 weeks.

A Study Evaluating The Effects of Throat Packs During Nasal Surgery – A Randomised Controlled Trial

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Objectives

The aims of this study were to identify differences in post-operative nausea and vomiting (PONV) and throat pain between throat packed and non-packed patient groups in nasal surgery.

Methods

This was a prospective, double blind, randomised controlled trial. Patients were randomised into throat and non-throat pack groups. A validated PONV questionnaire was completed 6 hours post-operatively. Visual analogue scores (VAS) for throat pain were completed in recovery, 2, and 6 hours post-operatively.

Results

80 patients were enrolled (40 into each group based on power calculation). Mean PONV score for the throat pack group was 2.75 and the mean PONV score for the non-packed group was 0.36. The difference in PONV was not statistically significant (P value = 0.375, 95% confidence interval (CI) = -1.19 - 3.32).

With regards to throat pain VAS scores, in recovery, the mean scores for the throat packed and non-throat pack groups were 2.5 and 1.3 respectively. Statistical analysis showed significant difference with the throat pack group experiencing more throat pain in recovery (P value = 0.018 (95% CI = 1.13 - 2.52)). At 2 hours and 6 hours post-operatively, statistical analysis showed no difference in the mean throat pain VAS scores for the throat packed group (2.1 and 2.3 respectively) and non-throat packed group (2.3 and 1.4 respectively).

Conclusion

The use of throat packs in nasal surgery does not confer PONV reduction benefit. The use of throat pack however is associated with a small but statistically significant more throat pain in the recovery period.