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Effects of levocetirizine as add-on therapy to fluticasone in seasonal allergic rhinitis

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Introduction

We aimed to compare outcome measures within a study assessing the benefits of combination therapy in seasonal allergic rhinitis.

Method

We conducted a double blind, placebo-controlled, cross-over study of 27 patients. Following two weeks without treatment, subjects used fluticasone with either levocetirizine or identical placebo for two weeks each. Responses were assessed using the Juniper mini rhinoconjunctivitis quality of life questionnaire, domiciliary peak nasal inspiratory flow, total nasal symptoms scores and nasal nitric oxide concentrations. Effects were interpreted and tested against minimum clinically important differences.

Results

For treatment signal, strength and consistency were best for quality of life scores, while nasal nitric oxide had poor signal. Improvements were statistically significant for both groups, compared with baseline, for quality of life ($p < 0.0001$), peak nasal inspiratory flow ($p < 0.05$) and nasal symptoms ($p < 0.0001$), although only the latter reached clinical significance (i.e. 95 per cent confidence interval (CI) $> +1$ minimum clinically important difference). The mean (one-sided 95 per cent CI) effects for placebo versus levocetirizine were non-inferior: quality of life -0.11 (-0.34), peak nasal inspiratory flow 0.57 (5.23), symptoms -0.11 (-0.60) and nitric oxide -5.6 (-77.5). For each subject experiencing a clinically relevant additive effect, numbers needed to treat were: quality of life, 14 (five to 49); peak nasal inspiratory flow, four (three to seven); symptoms, three (two to six); and nitric oxide, three (two to six).

Conclusions

There was a considerably better signal-to-noise ratio for quality of life measurements than for other outcomes. For the majority of patients, the antihistamine add-in to nasal steroid treatment had no benefit.

Decongestant effects of nasal xylometazoline and mometasone furoate in persistant allergic rhinitis

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Introduction

We aimed to both compare and correlate 15-minute response to nasal xylometazoline (XYLO) with 28-day response to nasal mometasone furoate (MF).

Method

Thirty-six persistent allergic rhinitis sufferers were studied. Patients' responses to 0.1 per cent XYLO (1 spray each nostril) were measured on two occasions, then a randomized, double blind, cross-over comparison of MF (200 μg daily) with placebo was conducted. Outcomes were peak nasal inspiratory flow (PNIF), nasal forced inspiratory volume in one second (nFIV1) and nasal blockage score (NBS) improvements.

Results

Thirty-one participants completed per protocol. The within-subject standard deviation for percentage improvement to XYLO was 26.0 for PNIF and 25.2 for nFIV1. The median percentage improvement (95 per cent confidence intervals) in PNIF for XYLO *vs* MF was 20.0 (11.4 to 31.0) *vs* 9.6 (3.2 to 15.8) and in nFIV1 was 17.8 (10.0 to 28.1) *vs* 3.3 (-4.3 to 19.1) The effects of XYLO were greater than those of MF ($p < 0.05$) for PNIF, nFIV1 and NBS. There was no significant correlation of MF to XYLO improvements for PNIF, nFIV1 or NBS.

Conclusions

Acute reversibility to XYLO showed poor repeatability and XYLO reversibility was predictive of decongestant response to MF. However, rhinitis medicamentosa still precludes any preference for long term XYLO therapy at this time.

Expanding horizons in day-case rhinological surgery

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Introduction

We aimed to identify the incidence and causes of surgical and anaesthetic complications and admissions to hospital from the day surgical unit, Charing Cross Hospital, London.

Method

We undertook a one-year, prospective audit of day-case rhinological surgery (October 2000 to October 2001).

Results

One hundred and ninety-eight patients underwent 214 procedures. This represented 45 per cent of both day-case and in-patient rhinological procedures performed during the study period. The case notes of 195 patients were available for analysis (98.5 per cent). Nearly 40 per cent of patients underwent more complex procedures, such as functional endoscopic sinus surgery (FESS) and rhinoplasty. Twenty-four per cent of patients underwent septoplasty with or without turbinate reduction, 18 per cent underwent manipulation of fractured nasal bones and the remaining

cases included endoscopic dacrocystorhinostomy, inferior turbinate reduction, biopsy and excision of lesions. Forty-one per cent of procedures were performed by a consultant surgeon. Five patients (2.3 per cent) required an unplanned overnight admission. This was 50 per cent more likely to be for anaesthetic reasons rather than surgical complications. In seven patients (3.3 per cent), post-operative complications due to local infection occurred following septoplasty, septorhinoplasty and FESS. Registrar surgical interventions were three times more likely to result in adverse events compared with consultant-led procedures; this was evident for both unplanned overnight admissions ($p > 0.1$) and other complications ($p > 0.5$), although the differences were not statistically significant due to the small number of adverse events.

Conclusions

The complete spectrum of rhinological surgery carried out with the appropriate protocols in a consultant-led procedure was associated with a very low and acceptable morbidity rate. We conclude that now is an opportune time for ENT surgeons to expand their rhinological repertoire for day-case management.

A double blind, randomized, controlled trial of topical lignocaine in reducing the pain of pack removal after nasal surgery

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Introduction

The removal of packs after nasal surgery is often the most painful part of the procedure for the patient. The objective of this study was to assess the efficacy of lignocaine in reducing this pain.

Method

Patients with Merocel nasal packs in situ following septoplasty, septorhinoplasty, reduction of inferior turbinates or endoscopic sinus surgery of nasal polypectomy were randomized to receive 10 mls of either 2 per cent lignocaine or 0.9 per cent saline on the packs ten minutes prior to their removal. The pain experienced on removal of the packs was recorded on a visual analogue scale. The patient and assessor were blinded to the solution received. The use of intra-operative Moffat's solution and post-operative oral analgesia in each patient was also recorded.

Results

Fifty-eight patients (43 men and 15 women) with a mean age of 38 years (range, 16 to 84 years) were recruited. Twenty-eight patients were randomized to receive lignocaine and 30 patients were randomized to receive saline. The main pain score was 3.5 in the lignocaine group and 3.9 in the saline group, with no evidence of a difference between the two groups (Mann–Whitney U test, $p = 0.52$). There was no evidence of an association between the group and the operations performed (χ^2, $p = 0.11$–1.00), the use of intra-operative Moffat's solution (χ^2, $p = 0.33$) or the use of post-operative oral analgesia (Fisher's exact test, $p = 0.24 - 0.97$).

Conclusion

Topical lignocaine does not reduce the pain of pack removal following nasal surgery.

Sino-nasal sarcoidosis with central nervous system involvement: case report and review

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Introduction

We report a case of simultaneous presentation of sino-nasal and central nervous system sarcoidosis without pulmonary involvement.

Method

Case report and literature review.

Results

A 49-year-old man presented with chronic nasal blockage, epistaxis and dry cough. A provisional diagnosis of chronic rhinosinusitis was made. He did not improve with medical treatment so septoplasty with functional endoscopic sinus surgery was performed. Follow up revealed a septal perforation and a small oro-nasal fistula through the hard palate. Histopathological examination of the patient's mucosal biopsy raised the possibility of sarcoidosis. Following a multidisciplinary case conference, sino-nasal sarcoidosis was confirmed with further maxillary antrum biopsies. The possibility of neurological involvement was also raised due to hyperaesthesia over the T2–T6 dermatomes. Magnetic resonance imaging (MRI) showed the spinal cord to be abnormal in appearance and expanded from C6 to T5, more prominent on T2-weighted images. No pulmonary involvement could be found on chest X-ray or computed tomography scan of the patient's thorax. After stabilization of his active disease with steroid and immunosuppressive therapy, the palatal fistula was closed successfully. A further MRI examination showed complete resolution of the cerebral and thoracic spinal cord inflammation.

Conclusions

Sino-nasal sarcoidosis can present as chronic rhinosinusitis. The pre-operative diagnosis is difficult without histopathological evidence. It is also important to recognize that sino-nasal sarcoidosis can be the initial presentation of multisystem disease. A multidisciplinary team approach is essential in the management of this condition.

Permacol augmentation rhinoplasty: results of a four-year experience

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Introduction

We report our four-year experience of using Permacol (an acellular biomaterial manufactured from porcine dermal collagen) in augmentation rhinoplasty. At the time of writing, our unit had the biggest and longest running series in terms of nasal dorsal augmentation.

Method

From May 2001 to July 2004, a total of 45 patients who required nasal augmentation and in whom autologous cartilage use was deemed not possible, underwent augmentation rhinoplasty using Permacol. A single operator (AH) performed all procedures. Follow up was for a total of three years.

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Results

The 45 patients who underwent Permacol augmentation rhinoplasty were followed up for between 259 and 1397 days (median = 879 days). Only two complications occurred: the first being an epistaxis at one week post-surgery, requiring an intranasal pack; and the second requiring implant removal in the first post-operative week, as a precaution, following the patient developing severe rhinosinusitis. At the time of writing, the remaining 44 patients had had no evidence of infection or extrusion and the results were deemed satisfactory.

Conclusions

The use of non-autologous material in augmentation rhinoplasty has always been associated with a higher rate of infection and extrusion than when using the patient's own cartilage. In our experience of using Permacol, this did not appear to be the case. We found Permacol to be a convenient and easy material to use and also to produce excellent cosmetic results. However, we realize that even longer term follow up is required before definite conclusions can be drawn on long-term success.

Laser to non-laser dacrocystorhinostomy: a completed audit cycle

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Introduction

Recent trends have shown non-laser dacrocystorhinostomy (DCR) to have a better outcome (i.e. tearing reduced or avoided) compared with laser DCR. The objective of this study was to evaluate the clinical outcome of endonasal DCR following a change of practice from laser to non-laser DCR.

Method

The main outcome measured was the absence of, or significant reduction in, tearing.

Methods

The first part of the audit (2001 to 2002) involved 41 endonasal KTP laser-assisted DCRs in 29 patients (22 women, seven men), all performed by a combined team of eye and ENT surgeons at the Freeman hospital. Details of surgical procedure, complications and factors affecting outcomes were recorded. The main outcomes were recorded at 12 months. The success rate was 78 per cent (i.e. 53 per cent with no tearing and 47 per cent with a significant decrease in tearing). The pathology associated with failure included intranasal pathology, mucocele and systemic sarcoidosis. Following the change of practice in 2003 to cold steel DCR, we evaluated the results of 55 endonasal DCRs in 40 patients (2003 to 2004) operated on by the same team of surgeons. These results were compared with the previous results.

Results

Overall, the success rate after endonasal cold steel DCR was still 78 per cent (i.e. 72 per cent with no tearing and 28 per cent with decreased tearing). There was a significant relationship between previous DCR surgery (Fisher's exact test, $p = 0.003$) and the size of the rhinostomy (<4 mm) (Fisher's exact test, $p = 0.046$).

Conclusions

The overall success rate after the change of practice to non-laser (cold steel) DCR remained the same; however, the number of patients experiencing complete resolution of symptoms increased from 53 to 72 per cent. We currently practise non-laser endonasal DCR.

Assessment of safety and efficacy of arterial embolization in the management of intractable epistaxis in Sheffield hospitals

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Objective

To evaluate the outcomes of intractable epistaxis managed with arterial embolization.

Method

Fourteen sequential cases of intractable epistaxis that underwent embolization between years 2000–2005 in our centre were evaluated retrospectively and interviewed over the phone. All patients had undergone several failed treatment modalities prior to embolization. Patients' follow up ranged from one to 57 months, with median of 26 months.

Results

All 14 cases underwent a single embolization procedure, with successful arrest of epistaxis. Four cases (29 per cent) developed recurrent epistaxis at a later date. One (7 per cent) required re-embolization 19 months after his first procedure. One patient bled 17 days after embolization, but this settled with hospital admission and bismuth iodoform paraffin paste (BIPP) packing. Another two patients developed minor episodes of epistaxis, which did not require hospital admission. Two patients developed local ischaemic complications following arterial embolization. One patient developed necrosis of the left alar skin and cartilage, which healed reasonably well after five months. Another patient developed mucosal necrosis of the right side of the hard palate; this patient bled without causing any functional impairment of the oral cavity.

Conclusions

Embolization is a successful intervention in the management of persistent epistaxis when other interventions fail. The risks of major complications, such as stroke, are well known and are discussed with patients prior to the procedure. It is also important to discuss with the patient the risk of ischaemic damage to the face and oral cavity. In our experience, these complications were minor and outweighed by the benefits of the procedure.

Endoscopic sinus surgery

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Introduction

Endoscopic sinus surgery (ESS) has become the surgical treatment of choice in the management of chronic rhinosinusitis. Maintenance of an appropriate distance between the rod lens telescope end and the instrument tip (i.e. the intra-operative distance (IOD)) is one of the key skills needed to operate safely. As with other forms of video-monitor surgery, three-dimensional cues such as instrument length and the dynamic relationship between the instruments and landmarks in the surgical field offer important support to correct visual-spatial orientation. On-screen instrument length varies with changes in IOD.

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No work has been done previously on estimating and characterizing IOD.

Method

We compared sequential IODs obtained using a life-size ESS simulation with on-screen distances as seen by the surgeon.

Results

On-screen image distances correlated in a linear relationship with actual IODs only for short distances of up to 10 mm. Beyond IODs of 10 mm, the relationship was no longer linear, and the on-screen IOD did not appear to increase at all as the true IOD increased from 10 to 25 mm.

Conclusions

On-screen visible instrument length is a poor cue for three-dimensional depth perception in ESS; sizing of the background operative field may offer better three-dimensional orientation cues.

Endoscopic sphenopalatine artery ligation and diathermy: an 11-year retrospective analysis from Charing Cross Hospital

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Introduction

We aimed to assess retrospectively the outcome of endoscopic transnasal sphenopalatine artery (SPA) ligation and diathermy in the surgical management of intractable posterior epistaxis, over an 11-year period at our hospital.

Method

Over 250 patient notes were identified. We decided not to introduce any exclusion criteria as we thought this gave a better reflection of true day-to-day practice in the surgical arrest of epistaxis. Our definition of failure following SPA ligation or diathermy was a significant bleed of sufficient severity to require repacking, readmission or return to theatre.

Results

A total of 66 patients were identified, with a median age of 57 years (range, 17–89 years). The median number of days from admission to surgery was three, with an average duration of stay of 6.1 $\pm$ 5.2 days (median, five days). Postoperative stay averaged 2.6 $\pm$ 3.9 days (median, one day). We calculated a failure rate of about 9 per cent, using our adopted definition of failure. Complications included septal perforation, crusting, diplopia, adhesions, numbness, otalgia, sloughing of turbinate, rhinorrhoea, dryness, methicillin-resistant *Staphylococcus aureus* cellulitis and deep venous thrombosis.

Conclusions

The published success rates of the established techniques of ligating the internal maxillary artery (91 per cent) and the external carotid artery (93 per cent) are similar to our figures for SPA ligation (91 per cent), as would be anatomically expected. However, SPA ligation requires minimal dissection at the most distal blood supply for the major part of the nose and is not associated with the potential risk of damage to the hypoglossal and vagus nerves in the neck or the potential inability to identify the internal maxillary artery in the pterygopalatine fossa. These factors combined have led to a less invasive approach, with decreased surgical morbidity.

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