The Journal of Laryngology & Otology, E6, 1 of 3.

doi:10.1017/S0022215115002819

ONLINE ONLY ABSTRACT SELECTION

Abstracts presented at the Laryngology and Rhinology Section Meetings, Royal Society of Medicine, 6 February 2015, London, UK

The Chronic Rhinosinusitis Epidemiology Study: a case–control study of medical, psychological and socio-economic factors influencing chronic rhinosinusitis severity – an overview

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Objectives

The study aimed to: identify any difference in socio-economic variables between patients with chronic rhinosinusitis and healthy controls; to determine any differences in quality of life between the chronic rhinosinusitis sufferers and controls; and to identify any significant associations between chronic rhinosinusitis and other medical co-morbidity, psychiatric disease or environmental exposure.

Methods

Materials included: a participant-reported study-specific questionnaire considering environmental, medical and socio-economic factors; the short-form 36-item questionnaire; and the Sinonasal Outcome Test 22. Participants included individuals with chronic rhinosinusitis with nasal polyps, chronic rhinosinusitis without nasal polyps, and allergic fungal rhinosinusitis, and healthy controls. Thirty sites from across the UK were involved following elevation of the study to the National Institute for Health Research Clinical Research Network Portfolio.

Results

There were 1470 respondents in total. Several markers of socio-economic status were considered, including an index of multiple deprivation, income and education. Highly significant differences were found in quality-of-life scores between chronic rhinosinusitis sufferers and controls.

Conclusion

This is an overview of the largest epidemiological study of chronic rhinosinusitis in the UK. Chronic rhinosinusitis was associated with poorer quality of life, and some psychiatric diseases and medical co-morbidities.

Long-term voice outcomes of patients treated with radiotherapy versus laser excision for early glottic tumours

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Introduction

Voice outcomes following intervention for early glottic tumours have been reported, but in small cohorts with short-term follow up. We present our long-term voice outcome data comparing radiotherapy and transoral laser surgery for early glottic tumours.

Methods

A retrospective review was conducted of glottic lesions with a tumour staging of T_1 to T_3. The study comprised patients attending a tertiary referral voice clinic for post-treatment follow up with Voice Health Index 10 scores. The follow-up period was up to five years.

Results

There were 67 patients identified with Voice Health Index 10 data available. Thirty-one patients underwent laser resection and 36 underwent radiotherapy. The mean follow-up period was 2.38 years (range, 0.25–5 years). There was an improvement in mean Voice Health Index 10 in both groups over time. Delayed early deterioration in voice was observed for radiotherapy patients, but long-term recovery to normal was statistically faster with radiotherapy.

Conclusion

Long-term voice outcomes for both radiotherapy and laser treatment are comparable. The single treatment event and fewer side effects of laser excision make it a preferred option.

Transnasal oesophagoscopy: is there a role in the ENT clinic?

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Objective

Transnasal oesophagoscopy represents a novel tool in oto-rhinolaryngology. We aimed to evaluate its role in the ENT clinic and examine associated patient perceptions.

Methods

A prospective study was conducted ($n = 78$) over a one-year period. Transnasal oesophagoscopy pick-up rate of pathologies was evaluated and patient experience assessed.

Results

Seventy-eight patients underwent transnasal oesophagoscopy. The commonest indications included reflux symptoms (28.9 per cent), pharyngeal hypersensitivity (27.6 per cent), suspicion of neoplasia (26.3 per cent) and globus (17.1 per cent). Positive findings were identified in 72.4 per cent of cases (gastroesophageal reflux in 32.9 per cent), with malignancy and benign structural lesions identified in 7.9 per cent and 6.6 per cent of cases respectively. Most patients (97.4 per cent) tolerated transnasal oesophagoscopy well.

Conclusion

Transnasal oesophagoscopy is a simple investigation that can be performed in the out-patient setting. It requires no sedation, allows biopsies to be obtained and is well tolerated. With transnasal oesophagoscopy, the majority of patients can be diagnosed in the clinic without the need for further investigations or referrals. Transnasal oesophagoscopy is particularly useful for patients with globus, reflux symptoms, and suspicion of structural lesions or oesophageal neoplasia.

Vagal nerve stimulator implantation: a UK otolaryngology department's 8-year experience of implanting 52 patients

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Introduction

Vagal nerve stimulation is a treatment for intractable epilepsy. Our case series is from the UK's only otolaryngology department performing vagal nerve stimulator implantation.

Method

A retrospective review of practice.

Results

Over 8 years (between 2006 and 2014), 52 patients were implanted with a vagal nerve stimulator. Over half of the patients experienced a reduction in seizure rate, and in one patient there was a concurrent reduction in requirement for anti-epileptic medications. One patient developed transient vocal fold paresis, which recovered. Thirteen patients (25 per cent) had minor complications that did not affect their quality of life. This was mainly laryngeal irritation affecting speech when the devices were active.

Discussion

Our experience confirms that ENT surgeons, through their training, are ideally suited to implant these devices at the request of neurologists, and are equipped to deal with the complications, laryngeal or otherwise, which may arise.

Human papilloma virus type 16 E7 seropositivity in head and neck squamous cell carcinoma compared to healthy controls

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Introduction

Although it has been demonstrated that seropositivity to human papilloma virus (HPV) type 16 oncoproteins E6 and E7 in HPV-positive head and neck squamous cell carcinoma (SCC) confers better survival rates, little information is available which compares serum antibody titres to those in healthy controls. The study therefore aimed to compare serum E7 antibody levels in HPV-positive head and neck SCC patients and healthy controls.

Methods

The presence of HPV-16 was determined in head and neck SCC patients ($n = 85$) using p16 immunohistochemistry (CinTec®). Patients and healthy controls ($n = 25$) were tested for seropositivity to HPV-16 E7 with an enzyme-linked immunosorbent assay developed in house.

Results

Twenty-one patients were found to be p16 positive. No significant difference in E7 antibody level was observed amongst the HPV-positive and HPV-negative patients. Half of the healthy subjects also displayed an antibody response to E7.

Discussion

The presence of a similar level of antibody response to E7 in healthy subjects and HPV-positive head and neck SCC patients suggests that antibody titres against this antigen are not useful as a diagnostic tool.

A potential new chemotherapy to treat radioiodine-resistant thyroid cancer

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Introduction

PBF is a proto-oncogene implicated in thyroid cancer. It is associated with advanced stage, disease recurrence and poor prognosis. Thyroid-specific over-expression results in significant goitre formation and repression of iodide uptake. Identifying a method of targeting the phosphorylation of the protein may provide a novel therapy for these cancers.

Methods

Tandem mass spectrometry identified Src and thyroglobulin as binding partners of PBF. The effects of these interactions were assessed via iodide uptake, secretion assays and immunofluorescence.

Results

Src over-expression resulted in increased phosphorylated PBF in thyroid cancer cell lines as well as human thyrocytes, ameliorated by treating cells with a Src-specific tyrosine-kinase inhibitor (PP1). This was also associated with reduced iodide avidity (47.3 ± 7.3 per cent of control, $p < 0.01$, $n = 5$) and could be reversed by treatment with PP1, with uptake in these cells increased back to normal levels (82.8 ± 33.6 per cent increase, $p < 0.05$, $n = 5$). Thyroglobulin co-localised with PBF; an additional potential mechanism of thyroid cancer invasion was identified.

Discussion

These data describe a mechanism for targeting PBF phosphorylation using a tyrosine-kinase inhibitor to increase iodide uptake in thyroid cells, as well as a potential mechanism for cancer metastasis. This therefore provides a potential therapeutic strategy for radioiodine-resistant malignancies.

Investigating the role of the novel cytokine interleukin-35 in the regulation of anti-tumour immunity against head and neck cancer

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Introduction

Cancer cells have the ability to induce immune tolerance, which aids in tumour survival. This study investigated whether interleukin (IL)-35, a novel immune-suppression

https://doi.org/10.1017/S0022215115002819 Published online by Cambridge University Press

cytokine, was expressed in head and neck cancer cells and whether pro-inflammatory cytokines produced by anti-tumour immune cells were able to up-regulate IL-35 expression.

Methods

Head and neck cancer cell lines (H357, H376, FADU, C1 and VB6) were cultured and stimulated, with or without interferon ɣ. The FADU cells were also stimulated with tumour necrosis factor α. The expression of IL-35 subunits (EBI3 and IL-12p35) was investigated by real-time quantitative polymerase chain reaction and Western blotting.

Results

All five head and neck cancer cell lines expressed both IL-35 subunits. Interferon ɣ stimulation up-regulated the expression of the IL-12p35 subunit in all cell lines. Tumour necrosis factor α up-regulated EBI3 expression in FADU cells.

Discussion

Anti-tumour immunity mediated by pro-inflammatory cytokines stimulates head and neck cancer cells to produce the immune-suppressing cytokine IL-35. This may serve an important role in cancer cells inducing immune tolerance and may be a novel therapeutic target.

https://doi.org/10.1017/S0022215115002819 Published online by Cambridge University Press