

Abstract selection

Proton MR spectroscopy of squamous cell carcinoma of the extracranial head and neck: *in vitro* and *in vivo* studies. Mukherji, S. K., Schiro, S., Castillo, M., Kwock, L., Muller, K. E., Blackstock, W. Department of Radiology, University of North Carolina School of Medicine, Chapel Hill 27599, USA. *American Journal of Neuro-Radiology* (1997) June–July, Vol. 18 (6), pp. 1057–72.

PURPOSE: To determine the ability of *in vitro* one-dimensional and two-dimensional proton MR spectroscopy to help differentiate squamous cell carcinoma of the extracranial head and neck from normal tissues and to correlate the *in vitro* observations with clinical studies. **METHODS:** *In vitro* 1-D and 2-D correlated proton MR spectroscopy (11 T) was performed in tissue specimens of squamous cell carcinoma of the head and neck (n = 19), in normal tissue (n = 13), in metastatic cervical lymph nodes (n = 3), and in a squamous cell carcinoma cell line. *In vivo* 1-D proton MR spectroscopy (1.5 T) was performed in patients with squamous cell carcinoma (n = 7) and in healthy volunteers (n = 7). The ratio of the areas under the choline (Cho) and creatine (Cr) resonances were calculated for 1-D proton MR spectra for the *in vitro* tissue studies and correlated with the *in vivo* studies. Data from *in vitro* 2-D correlated spectroscopy were analysed for differences in the presence or absence of various metabolites in samples of tumour and normal tissue. Statistical analysis consisted of 2 × 2 factorial repeated measures analysis of variance (ANOVA), discriminate analysis, and chi2 test. **RESULTS:** The mean *in vitro* 1-D proton MR spectroscopic Cho/Cr ratio was significantly higher in tumour than in normal tissue. The difference between the mean ratios appeared to increase with increasing echo time. All *in vivo* tumour Cho/Cr ratios were greater than the calculated mean *in vitro* tumour ratio, whereas six of the seven volunteers had no detectable Cho and Cr resonances. Two-dimensional correlated MR spectroscopic data revealed that a variety of amino acids have a significantly greater likelihood of being detected in tumour than in normal tissues. **CONCLUSIONS:** One-dimensional and 2-D proton MR spectroscopy can help differentiate primary squamous cell carcinoma and nodal metastases containing squamous cell carcinoma from normal tissue both *in vitro* and *in vivo*. In addition, 2-D spectroscopy can help identify the presence of certain amino acids in squamous cell carcinoma that are not detected in normal tissue. Author.

Middle ear mechanics in subjects with rheumatoid arthritis. Colletti, V., Fiorino, F. G., Bruni, L., Biasi, D. ENT Department, University of Verona, Italy. *Audiology* (1997) May–June, Vol. 36 (3), pp. 136–46.

The incudo-malleolar and incudo-stapedial joints are true diarthroses and therefore may be subject to the same rheumatic lesions as any other articulation in the body. The existence of this involvement in rheumatoid arthritis (RA), however, is highly controversial. The present study investigates modifications of the mechanical properties of the middle ear in a group of subjects with RA by evaluating the resonance frequency obtained with multiple-frequency tympanometry (MFT). Thirty patients with RA, aged 20 to 68 years (mean age: 45.8 ± 12.4 years), participated in the investigation. Their data were compared with those obtained in a control group of 48 age-matched subjects. Results obtained in both ears were examined in all subjects. The two groups displayed almost equal hearing levels with mean air conduction thresholds ranging from 10 to 22 dB HL. None of the subjects displayed an air-bone gap greater than 5 dB. Normal resonance frequency, calculated at the 95th percentile from the control group, ranged from 900 to 1250 Hz. Twelve rheumatoid arthritis patients (40 per cent) displayed abnormal resonance values. These findings were monolateral in nine patients and bilateral in three. Eleven

out of 15 ears with abnormal multiple-frequency tympanometry data were characterized by an increase in resonance and four by a decrease. A correlation between abnormal resonance values and more aggressive RA was established. The results of this study suggest that rheumatoid arthritis may involve the incudo-malleolar and incudo-stapedial joints, altering the ossicular mechanics in response to static air pressure modifications. This does not impair sound conduction through the middle ear, but might reduce the protective mechanisms of the middle ear towards high static pressures. Author.

Assessing aspects of auditory handicap by means of pupil dilatation. Kramer, S. E., Kapteyn, T. S., Festen, J. M., Kuik, D. J. Department of Otolaryngology, University Hospital VU, Amsterdam, The Netherlands. *Audiology* (1997) May–June, Vol. 36 (3), pp. 155–64.

The demand on extra effort and concentration during listening are notorious handicapping effects of hearing impairment as is shown by self-assessment studies. In an attempt to explore new ways of assessing hearing handicap, the present study focuses on an objective measure of mental effort during listening. Pupil dilatation is used as the index of mental effort. Results for 14 hearing-impaired and 14 normal hearing listeners show a relation between pupil dilatation and difficulty in speech reception in noise, as manipulated by the speech-to-noise ratio. In addition the study shows that, with regard to effort and concentration, hearing-impaired subjects benefit less than normals from easier listening situations (e.g. at 5 dB above the individual speech-reception threshold). The results show a significant correlation between self-rated handicap and pupil dilatation. Author.

Melanoma of the nose. Papadopoulos, T., Rasiah, K., Thompson, J. F., Quinn, M. J., Crotty, K. A. Sydney Melanoma Unit, Royal Prince Alfred Hospital, Camperdown, Australia. *British Journal of Surgery* (1997) July, Vol. 84 (7), pp. 986–9.

BACKGROUND: Melanoma of the nose is rare and management guidelines are poorly defined. In the past, excision margins have often been much narrower than for melanoma elsewhere. **METHODS:** The study was a retrospective clinicopathological study of 34 patients with cutaneous melanoma of the nose treated in a single unit. **RESULTS:** Desmoplastic neurotropic melanoma and lentigo maligna melanoma were the most common histological tumour types. Local recurrence occurred in eight patients, and in six cases appeared to be a result of inadequate excision margins. Regional lymph node metastases were associated with a very poor prognosis. **CONCLUSION:** Adequate surgical excision is the mainstay of successful treatment for melanoma of the nose. Excision margins for nasal melanoma should not be any less than for melanoma elsewhere. Careful planning is required, not only to gain local disease control and the best chance of cure, but also to achieve functionally and aesthetically acceptable results. Excision margins need not be compromised in view of the variety of local flaps that can be employed to close the primary defect. Author.

Adherence to prescribed explicit criteria during utilization review. An analysis of communications between attending and reviewing physicians. Kleinman, L. C., Boyd, E. A., Heritage, J. C. Department of Pediatrics, University of California, Los Angeles, USA. *Journal of the American Medical Association* (1997) 13 August, Vol. 278 (6), pp. 497–501.

CONTEXT: Utilization review (UR) seeks to improve quality and cost-efficiency of health care. However, how well the process works in practice has not been assessed. **OBJECTIVE:** To describe the outcomes of a sample of physician reviews in terms of the explicit criteria that the UR was designed to implement.

DESIGN: Retrospective analysis of transcripts of precertification reviews. **PARTICIPANTS AND SETTING:** California physicians employed by a UR firm conducted 96 interviews from April 1990 to July 1991 with attending physicians who had proposed to insert tympanostomy tubes on a patient younger than 16 years and whose proposals had been found to be inappropriate on an initial screen. **MAIN OUTCOME MEASURES:** The appropriateness rating assigned to each case by the physician-reviewer and by the investigators using explicit criteria. Logistic regression identified factors associated with the reviewers' recommendations to perform surgery and with recommendations at variance from the criteria. **RESULTS:** The reviewers recommended 78 per cent of cases for surgery, of which only 29 per cent were supported by the criteria or had extenuating circumstances. The criteria concurred with all 30 of the reviewers' recommendations against surgery. Two factors, female sex (odds ratio (OR), 8.2; 95 per cent confidence interval (CI), 1.2–53.8) and previous tympanostomy tube insertion (OR, 30.9; 95 per cent CI, 2.4–394.8) were associated with reviewer recommendations in favour of surgery that were at variance from the criteria, despite the lack of evidence for either as a mitigating circumstance. **CONCLUSION:** Physician reviewers were more lenient than the explicit criteria that the reviews were designed to implement. In no case did the reviewers depart from the criteria's recommendations in favour of surgery. Author.

Reattendance and complications in a randomised trial of prescribing strategies for sore throat: the medicalising effect of prescribing antibiotics (see comments). Little, P., Gould, C., Williamson, I., Warner, G., Gantley, M., Kinmonth, A. L. Faculty of Health, Medicine and Biological Sciences, Aldermoor Health Centre, Southampton University. *British Medical Journal* (1997) 9 August, Vol. 315 (7104), pp. 350–2. Comment in: *British Medical Journal* (1997) 9 August, Vol. 315 (7104), pp. 321–2.

OBJECTIVE: To assess the medicalizing effect of prescribing antibiotics for sore throat. **SETTING:** Eleven general practices in England. **DESIGN:** Randomized trial of three approaches to sore throat: a 10-day prescription of antibiotics, no antibiotics, or a delayed prescription if the sore throat had not started to settle after three days. **PATIENTS:** Seven hundred and sixteen patients aged 4 and over with sore throat and an abnormal physical sign: 84 per cent had tonsillitis or pharyngitis. **OUTCOME MEASURES:** Number and rate of patients making a first return with sore throat, pharyngitis, or tonsillitis. Early returns (within two weeks) and complications (otitis media, sinusitis, quinsy). Outcomes were documented in 675 subjects (94 per cent). **RESULTS:** Mean follow-up time was similar (antibiotic group 1.07 years, other two groups 1.03 years). More of those initially prescribed antibiotics initially returned to the surgery with sore throat (38 per cent v 27 per cent, adjusted hazard ratio for return 1.39 per cent, 95 per cent confidence interval 1.03 to 1.89). Antibiotics prescribed for sore throat during the previous year had an additional effect (hazard ratio 1.69, 1.20 to 2.37). Longer duration of illness (>5 days) was associated with increased return within six weeks (hazard ratio 2.90, 1.70 to 4.92). Prior attendance with upper respiratory conditions was also associated with increased reattendance. There was no difference between groups in early return (13/238 (5.5 per cent) v 27/437 (6 per cent)), or complications (2/236 (0.8 per cent) v 3/434 (0.7 per cent)). **CONCLUSIONS:** Complications and early return resulting from no or delayed prescribing of antibiotics for sore throat are rare. Both current and previous prescribing for sore throat increase reattendance. To avoid medicalizing a self-limiting illness doctors should avoid antibiotics or offer a delayed prescription for most patients with sore throat. Author.

Longitudinal survey of voice quality after pediatric laryngotracheoplasty. Francois, M., Dumont, A., Narcy, P. Department of Otorhinolaryngology – Head and Neck Surgery, Hospital Robert Debre, University Paris VII, France. *International Journal of Pediatric Otorhinolaryngology* (1997) 20 June, Vol. 40 (2–3), pp. 163–72.

This study assesses the effect of paediatric laryngotracheoplasty on voice quality. A group of 10 children who underwent laryngotracheoplasty with thyrotomy and anterior cartilage graft were examined two or more times after decannulation and their voices were compared to those of sex- and age-matched controls. Each examination included a laryngoscopy, evaluation by a speech/

language pathologist and measurement of maximum phonation times and fundamental frequencies using the Signalyse programme. The strength of the voices and the maximum phonation times gradually improved. The fundamental frequency became lower with age, as in the controls. The data suggest that laryngotracheoplasty does not hamper the development of voice with age in children and that the voice improves without any further surgery, although hoarseness remains. Author.

Extranasopharyngeal angiofibroma of the inferior turbinate. Gaffney, R., Hui, Y., Vojvodich, S., Forte, V. Department of Otolaryngology – Head and Neck Surgery, Beaumont Hospital, Dublin, Ireland. *International Journal of Pediatric Otorhinolaryngology* (1997) 20 June, Vol. 40 (2–3), pp. 177–80.

The first reported case of angiofibroma of an inferior turbinate is presented. The tumour occurred in a nine-year-old boy and was extirpated by subperiosteal dissection of the lateral nasal wall. Author.

Results of middle ear ventilation with 'Mangat' T-tubes. Siddiqui, N., Toynton, S., Mangat, K. S. ENT Department, James Paget Hospital, Great Yarmouth, Norfolk, UK. *International Journal of Pediatric Otorhinolaryngology* (1997) 20 June, Vol. 40 (2–3), pp. 91–6.

Tympanostomy tube placement has been shown to be an effective treatment for recurrent acute otitis media and chronic otitis media with effusion. The Senior author (K. S. Mangat), considered stiffness and the longer inner limbs of the Goode (Xomed) or Treace (Treace Medical) T-tubes as important factors in the high incidence of complications, and used smaller soft silicone. Mangat-tube (Xomed) with shorter inner limbs. A prospective study was undertaken over a five-year period (July 1987–July 1992) which was a continuation of a previous retrospective study of Goode and Treace T-tubes (Mangat, K. S., Morrison, G. A. J., and Ganiwalla, T. M. (1993) *International Journal of Pediatric Otorhinolaryngology* 25, 119–125). Three hundred and twenty-two Mangat tubes (M-tubes) were inserted in 191 patients with persistent otitis media with effusion. The peak ages for insertion were between four and six years. Spontaneous extrusion occurred in 240 ears (66.5 per cent; 154 patients) at a mean time of 29.3 months. Of these, there were 60 perforations at three months follow-up (18.6 per cent) which fell to 31 perforations after six months (9.6 per cent). Surgical extraction of the M-tube was necessary in 82 ears (22.7 per cent; 50 patients) following persistent otorrhoea or resolution of the condition. Otorrhoea, requiring treatment, was noted in 36 ears (11 per cent). No association was found between the occurrence of infection and the incidence of perforation persisting after a year. There was a higher incidence of persistent perforation in those requiring surgical extraction. The overall persistent perforation rate of only 9.6 per cent would appear to be less than that experienced with Goode or Treace T-tubes. Author.

Damage of the pharyngeal mucosa and hyperresponsiveness of airway in sinusitis. Rolla, G., Colagrande, P., Scappaticci, E., Bottomicca, F., Magnano, M., Brussino, L., Dutto, L., Bucca, C. Department of Biomedical Sciences and Human Oncology, University of Torino, Italy. *Journal of Allergy and Clinical Immunology* (1997) July, Vol. 100 (1), pp. 52–7.

BACKGROUND: In sinusitis bronchoconstriction is supposed to originate from pharyngobronchial reflexes triggered by seeding of the inflammatory process into the pharynx. **OBJECTIVE:** Our aim was to evaluate whether in sinusitis bronchial and extra-thoracic airway (EA) dysfunction correlate with morphologic abnormalities of the pharyngeal mucosa. **METHODS:** We performed histamine inhalation challenge, nasal lavage, and nasopharyngeal biopsies in 24 nonasthmatic patients with exacerbation of chronic sinusitis. The histamine PC20 was the threshold of bronchial responsiveness, and that causing 25 per cent fall in maximal midinspiratory flow was the threshold of EA responsiveness (PC25MIF50). Thresholds of 8 mg/ml or less were assumed to indicate bronchial hyperresponsiveness (BHR) or EA hyperresponsiveness (EAHR). PC20 and PC25MIF50 values were related to clinical data, nasal lavage fluid eosinophils, pharyngeal epithelium and basement membrane thickness, and density of submucosal vessels and nervous fibres. **RESULTS:** The PC20 was closely related to PC25MIF50 ($p = 0.0004$). Ten patients had EAHR, nine had combined EAHR and BHR, and five had neither EAHR nor BHR. EAHR was strongly associated with

epithelial thinning, and BHR with long-standing sinusitis, a lower PC25MIF50, increased submucosal nerve density and increased nasal lavage fluid eosinophils. **CONCLUSIONS:** Our findings suggest that in nonasthmatic patients with sinusitis, pharyngeal damage may contribute to airway dysfunction by favouring the access of irritants to submucosal nerve endings, with activation of constrictive reflexes to the EA. Proliferation of sensory neurons, consequent to long-lasting pharyngeal inflammation, may cause more severe EA narrowing and activate pharyngobronchial reflexes. Author.

Maxillary sinusitis caused by *Pleurophomopsis lignicola*. Padhye, A. A., Gutekunst, R. W., Smith, D. J., Punithalingam, E. Division of Bacterial and Mycotic Diseases, National Center for Infectious Diseases, Centers for Disease Control and Prevention, Public Health Service, U.S. Department of Health and Human Services, Atlanta, Georgia 30333, USA. *Journal of Clinical Microbiology* (1997) August, Vol. 35 (8), pp. 2136–41.

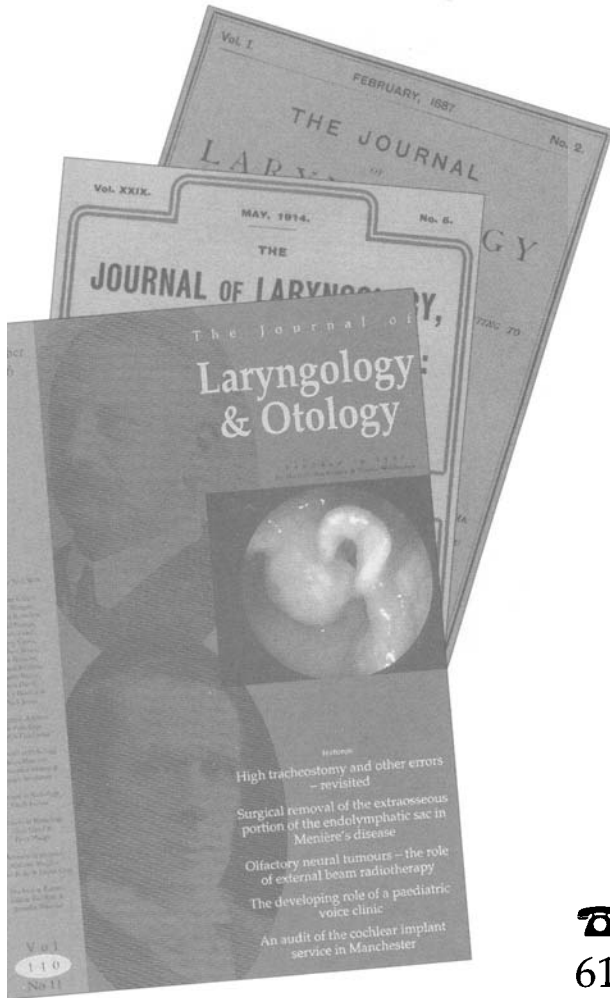
An immunocompetent 59-year-old man developed sinusitis over a six- to eight-month period after cutting down a rotted maple tree (*Acer* sp.). A polypoid obstruction with a bloody drainage was evident in his right nasal cavity. A computed tomographic scan showed an opacification of the maxillary sinus. Surgery was performed to remove a fungus ball that had extended into the patient's medial sinus cavity. Sections of the sinonasal mucosa revealed marked acute and chronic sinusitis with inflammation, congestion, and haemorrhage. Sections from the pasty brown to black debrided material revealed a fungus ball consisting of an extensive network of brown-pigmented, septate, profusely branched hyphae. When grown on oat agar, the phaeoid fungus produced pycnidia and was identified as *Pleurophomopsis lignicola*. The genus *Pleurophomopsis* includes seven species,

which are all known from plant material. This report documents for the first time a coelomycetous fungus, *P. lignicola*, causing sinusitis in an immunocompetent patient. Author.

Evaluation of multiple antibodies to Epstein-Barr virus as markers for detecting patients with nasopharyngeal carcinoma. Liu, M. Y., Chang, Y. L., Ma, J., Yang, H. L., Hsu, M. M., Chen, C. J., Chen, J. Y., Yang, C. S. Graduate Institute of Microbiology, College of Medicine, National Taiwan University, Taipei, Republic of China. *Journal of Medical Virology* (1997) July, Vol. 52 (3), pp. 262–9.

Five serological tests were assessed for their sensitivity for screening and early detection of nasopharyngeal carcinoma (NPC). The tests included the detection of antibodies to various gene products of EBV: viral capsid antigen (VCA) using an indirect immunofluorescence assay (FA), DNase using an activity neutralization test (NT), Dnase using an enzyme-linked immunosorbent assay (ELISA), DNA polymerase (DP) using NT, and major DNA binding protein (MDBP) by ELISA. Sera from 100 NPC out-patients and 20 NPC patients, who were detected in a prospective study, were examined. The results showed that levels of antibody to DNase detected by ELISA and to DP detected by NT and the positivity rate for VCA by FA increased with NPC stage. More species of EBV antibody became detectable as NPC progressed. The detection of anti-MDBP antibody by ELISA was suitable for screening for NPC. Anti-DP antibody detected by NT was a valuable marker both for early detection and prognosis of NPC. Detection of anti-DNase antibody by ELISA was the most sensitive method for detection of NPC. No single test was sufficient to detect all the NPC patients and a combination of anti-DNase by ELISA with other tests are recommended to identify NPC patients. Author.

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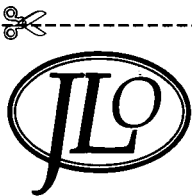
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