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Abstract Selection

Predictive value of clinical findings for temporomandibular joint effusion. Manfredini, D., Tognini, F., Zampa, V., Bosco, M. University of Pisa, Section of Prothstic Dentistry, Department of Neuroscience, Pisa, Italy. daniele.manfredini@tin.it *Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology, and Endodontics* (2003), November, Vol. 96 (5), pp. 521–6, ISSN: 1079-2104
OBJECTIVE: The aim of this work was to evaluate the predictive value of clinical symptoms for magnetic resonance imaging (MRI) findings of temporomandibular joint (TMJ) effusion. STUDY DESIGN: Sixty-one patients with TMJ pain were assessed by means of a standardized clinical examination and magnetic resonance image (MRI). A calibrated investigator evaluated the presence of eight clinical indicators (predictors) of TMJ effusion (outcome variable). A logistic regression analysis was performed to detect significant associations between clinical symptoms and MRI findings of TMJ effusion. The accuracy of the final logit to predict effusion was compared with that derived from univariate analysis. RESULTS: A clinical examination based upon the assessment of pain in the TMJ with lateral palpation, with posterior palpation, during motion, and during maximum assisted opening, and the presence of click and crepitus sounds has an accuracy of 78.7 per cent to predict TMJ effusion. Among the single clinical symptoms, the most reliable predictor of TMJ effusion is the presence of pain with lateral palpation (accuracy 76.2 per cent; K = .525). CONCLUSION; The use of a multiple regression approach demonstrated that an extensive clinical assessment which considers six main indicators consents to predict accurately the presence of MRI TMJ effusion. Based on these findings, MRI assessment should be reserved for patients in which the exact disco-condyle relationship needs to be evaluated.

Long-term hearing preservation after middle fossa removal of vestibular schwannoma. Friedman, R. A., Kesser, B., Brackman, D. E., Fisher, L. M., Slattery, W. H., Hitselberger, W. E. House Ear Institute, Los Angeles, CA 90057, USA. rfriedman@hei.org. *Otolaryngology – Head and Neck Surgery* (2003), December, Vol. 129 (6), pp. 660–5, ISSN: 0194-5998.
OBJECTIVE: We sought to determine long-term hearing preservation in vestibular schwannoma patients after undergoing middle fossa resection. STUDY DESIGN, SETTING, AND OUTCOME MEASURES: We conducted a retrospective chart review of patients undergoing middle fossa resection from 1990 to 1995 at a tertiary care centre. Pure-tone thresholds, before resection and at least five years after resection, and speech discrimination scores are reported. RESULTS: Seventy per cent of patients with immediate post-operative hearing maintained serviceable hearing at more than five years after surgery. Pure-tone average in the operative ear changed at the same rate as hearing in the unoperated ear during this follow-up period. CONCLUSIONS: More than two thirds of patients who underwent middle fossa resection of a vestibular schwannoma with some hearing postoperatively maintain that hearing at greater than five years of follow-up. Surgery alone does not have a negative impact on long-term hearing preservation.

Surgical treatment of otosclerosis in elderly patients. Ayache, D., Corre, A., Van Prooyen, S., Elbaz, P. Department of Otolaryngology, Fondation Adolphe de Rothschild, Paris, France. dayache@fo-rothschild.fr. *Otolaryngology – Head and Neck Surgery* (2003), December, Vol. 129 (6), pp. 674–7, ISSN: 0194-5998.
OBJECTIVE: The aim of this study was to analyze hearing results of stapes surgery in otosclerotic patients older than 65 years. STUDY DESIGN: Among 473 primary stapedectomies, 16 were performed in patients over 65 years old and were retrospectively reviewed. Hearing results were compared with those of a randomly selected group of 16 patients younger than 65 years old. RESULTS: Improvement in hearing (closure of the air-bone gap to <20 dB) was achieved in all of the cases, and closure of the air-bone gap to less than 10 dB occurred in 87.5 per cent at one month and in 81.8 per cent at the last evaluation (mean follow-up, 19.5 months). Hearing results were similar in elderly and younger patients. CONCLUSION AND SIGNIFICANCE: Stapes surgery is an effective procedure in elderly patients with otosclerosis to avoid hearing aid use or to facilitate hearing aid fitting.

Endoscopic removal of juvenile angiofibromas. Wormald, P. J., Van Hasselt, A. Department of Surgery, Adelaide University, Australia. peterj.wormald@adelaide.edu.au *Otolaryngology – Head and Neck Surgery* (2003), December, Vol. 129 (6), pp. 684–91, Refs: 9, ISSN: 0194-5998.
BACKGROUND: Angiofibromas have traditionally been removed through open procedures. All tumours in this consecutive series of patients were removed endoscopically. SETTING: Tertiary care hospital. MATERIALS AND METHODS: Seven consecutive patients presenting with an angiofibroma between 1994 and 2000 were included in the study. Tumour size varied with one stage 1, two stage IIa, three stage IIb, and one stage IIC according to the Radkowski *et al.* classification. The surgical technique is presented. RESULTS: After an average of 3.75 years (SD, 1.9 years), there have been no tumour recurrences. CONCLUSION: Endoscopic removal of angiofibromas in the nasal cavity, with extension into the sinuses and pterygopalatine fossa and with limited extension into the infratemporal fossa, can be removed endoscopically with a good success rate.

Thyroid function studies in patients with cancer of the larynx: preliminary evaluation. Aimoni, C., Scanelli, G., D-agostino, L., Pastore, A. Clinica ORL, Universita degli Studi di Ferrara, Ferrara, Italy. *Otolaryngology – Head and Neck Surgery* (2003), December, Vol. 129 (6), pp. 733–8, ISSN: 0194-5998.
OBJECTIVE: Our goal was to evaluate thyroid function before and after surgery only or radiotherapy plus surgery for laryngeal neoplasms. STUDY DESIGN AND SETTING: The study group consisted of a total of 30 patients with laryngeal cancer (22 treated with surgery only and eight treated with surgery plus radiotherapy) who were evaluated by ultrasensitive thyroid-stimulating hormone, free T4, and antithyroid antibodies both pre-operatively and at six and 12 months after surgery. RESULTS: All patients had normal thyroid function before treatment (one patient had elevated antithyroid autoantibodies); after one year, four (13.34 per cent) patients were hypothyroid. In three patients, it was subclinical (ie, elevated thyroid-stimulating hormone with normal free T4), and in one patient, it was symptomatic. CONCLUSION: Our preliminary data suggest that hypothyroidism occurs in a small but substantial proportion of patients undergoing surgery with or without adjuvant radiotherapy for laryngeal cancer. SIGNIFICANCE: Thyroid hormone dosing should be routinely included in the assessment of patients with laryngeal cancer, because it is simple and inexpensive and may allow the early diagnosis and management of hypothyroidism.

Coronal computed tomography prevalence of superior semicircular canal dehiscence. Williamson, R. A., Vrabec, J. T., Coker-Newton, J., Sandlin, M. Bobby R. Alford Department of Otorhinolaryngology and Communicative Sciences, Baylor College of Medicine, 6550 Fannin, Suite SM1727, Houston, TX 77030, USA. *Otolaryngology – Head and Neck Surgery* (2003), November, Vol. 129 (5), pp. 481–9, ISSN: 0194-5998.

OBJECTIVES: The relatively new clinical entity superior canal dehiscence syndrome (SCDS0 is diagnosed by clinical symptoms and signs. Coronal computed tomography (CT) has been used to confirm the diagnosis. A consecutive series of temporal bone CT scans was reviewed to define the prevalence of a dehiscent-appearing superior semicircular canal. STUDY DESIGN AND SETTING: Temporal bone CT scans performed over a two-year period at a university-based tertiary referral centre were reviewed independently by three individuals. Scans were excluded if coronal images were not obtained or reconstructed from axial images. Prevalence figures for dehiscent-appearing superior semicircular canal were determined by consensus. Medical records of selected individuals with a dehiscent-appearing canal were reviewed for study indications and otologic symptoms. RESULTS: A dehiscent-appearing superior semicircular canal was seen in nine per cent of studies. Correlation among examiners was greater than 94 per cent. Medical records indicated symptoms suggestive of or compatible with the diagnosis of SCDS in rare cases. CONCLUSION; The prevalence of a dehiscent-appearing superior semicircular canal on coronal CT of the temporal bones performed with 1.0 mm collimation is substantially greater than that predicted by temporal bone histological study. Clinical symptoms compatible with the diagnosis were seldom recorded, suggesting low specificity. The high sensitivity and low specificity of CT scan create a risk for over diagnosis of SCDS if the coronal CT scans are not correlated with clinical symptoms.

The agger nasi cell: the key to understanding the anatomy of the frontal recess. Wormald, P. J. Otolaryngology – Head and Neck Surgery, Queen Elizabeth Hospital, Woodville South 5011, South Australia, Australia. peterj.wormald@adelaide.edu.au. *Otolaryngology – Head and Neck Surgery* (2003), November, Vol. 129 (5), pp. 497–507, ISSN: 0194-5998.
The key to successful surgery in the frontal recess is a complete understanding of the anatomy. The frontal recess is behind the beak of the frontal bone between the lamina papyracea and superior portion of the middle turbinate. It is a hazardous and complex area with a range of anatomical configurations. This article describes the anatomy of the frontal recess as it relates to the agger nasi cell using this cell as the key around which the anatomy is built. The simplest anatomical configuration is explained first and this knowledge is built upon so that the more complex configurations can be better understood. The classification of frontal ethmoidal cells by Kuhn is incorporated into the anatomical description of the various configurations. The implication of each anatomical variation on the surgical approach to the frontal recess is discussed.

Clinical predictors of long-term success after endoscopic sinus surgery Dursun, E., Kormaz, H., Eryilmaz, A., Bayiz, U., Sertkaya, D., Samin, E. Otorhinolaryngology – Head and Neck Surgery Department, Ankara Training and Research Hospital, Ministry of Health, Ankara, Turkey. engindursun@superonline.com. *Otolaryngology – Head and Neck Surgery* (2003), November, Vol. 129 (5), pp. 526–31, ISSN: 0194-5998.
OBJECTIVE: Determining the clinical predictors of long-term success after endoscopic sinus surgery (ESS) would better guide the management of patients. METHODS: One hundred-thirty chronic rhinosinusitis (CRS) patients were evaluated retrospectively. Overall subjective improvement was 83 per cent with a mean follow-up of 60 months. Eighty per cent had anatomic variations; 36.2 per cent, allergy; 55.4 per cent, nasal polyps; and 26.9 per cent, history of previous operation. The improvement was 100 per cent, 94 per cent, 79.5 per cent, and 69.7 per cent in stages 0, I, II, and III, respectively. With other parameters, the success rates were 68.1 per cent and 91.6 per cent with and without allergy, 73.6 per cent and 94.8 per cent with and without polyps, 54.3 per cent and 93.7 per cent with and without previous history of surgery, 84.4 per cent and 82.7 per cent with and without anatomic variations, and 23.8 per cent and 94.4 per cent with and without recurrent polyps. CONCLUSION: In multivariate Cox regression analysis allergy ($p<0.05$; relative risk, 4.6) and previous polypectomy ($p<0.05$; relative risk, 9.9) were found to be predictors of poor prognosis in the long-term follow-up.

Immunohistochemical investigations on external auditory canal cholesteatomas. Adamczyk, M., Sudhoff, H., Jahnke, K. Department of Otorhinolaryngology, University of Essen, Essen, Germany. melanie.adamczyk@uni-essen.de. *Otology & Neurotology* (2003), September, Vol. 24 (5), pp. 705–8, ISSN: 1531-7129.
OBJECTIVE: The aim of the study was to analyze the biological behaviour of external auditory canal cholesteatoma (EACC). The expression and distribution of relevant markers such as transforming growth factor-alpha (TGF-alpha), epidermal growth factor-receptor (EGFR), and the proliferation marker MIB 1 were studied in comparison with normal auditory meatal skin. BACKGROUND: EACC are uncommon and knowledge concerning aetiology and pathogenesis is limited. Whether this is a unique entity remains controversially discussed. MATERIALS AND METHODS: Immunohistochemical methods were used to study the expression and distribution TGF-alpha, EGFR, and the proliferation marker MIB 1 tissues samples. Only the spontaneous form of EACC was included in this study. RESULTS: Positive immunoreactivity for the proliferation marker MIB 1 could be demonstrated in keratinocytes in the basal and suprabasal layers of the epithelium. The number of MIB 1-positive proliferating cells in cholesteatoma was significantly higher than in normal external auditory skin. Cholesteatoma epithelium also showed an enhanced expression of TGF-alpha and EGFR. Inflammatory infiltrate was observed in the perimatrix to various degrees. CONCLUSION: These results suggest that similar to the middle ear cholesteatoma, a chronic inflammatory process underlies the EACC, and the inflammatory stimuli may alter keratinocyte proliferation.

Treatment for severe palatoclonus by occlusion of the eustachian tube. Ensin, R. J. H., Vingerhoets, H. M., Schmidt, C. W. T. H., Cremers-Cor, W. R. J. Department of Otorhinolaryngology, Head and Neck Surgery, University Medical Center, Nigmegen, The Netherlands. *Otology & Neurotology* (2003), September, Vol 24, pp. 714–6, ISSN: 1531–7129.
PURPOSE: Surgical blocking of the eustachian tube is presented as an ultimate treatment option in a 11-year-old suicidal boy with a therapy-resistant, persistent clicking tinnitus caused by myoclonus of the levator veli palatini. PATIENT: An 11-year-old boy decompensated psychologically as a result of loud and objective tinintus. The tinnitus could be heard easily by an examiner by bringing his own ear at a distance of approximately 20 to 30 cm to the left ear of the patient. No neurological aetiology for the tinnitus could be traced. Paediatric psychiatric evaluation resulted in a recommendation to perform, as a last resort, an experimental surgical option like blockage of the eustachian tube. INTERVENTION: Treatment with Tegretol (Novartis, The Netherlands) had no effect. Treatment with Dysport (Ipsen) botulin toxin with 30 to 60 U was temporarily effective. Finally, 60 U were not effective anymore. As a last refugium, surgical blockage of the eustachian tube has been performed, first with bone cement and later by a more conventional surgical blockage of that bony tube. OUTCOME: After surgical blockage of the bony part of the eustachian tube, the objective tinnitus disappeared. Blockage of the protympanum by bone cement resulted in only one year of successful blocking. After recurrence of the tinnitus combined with aeration of the middle ear, a second surgical transcanal approach was successful in blocking the eustachian tube. With a grommet, the hearing level remained within 10 dB for 0.5 to 8.0 kHz.

Oral steroid treatment of sudden sensorineural hearing loss: a ten year retrospective analysis.. Chen, C. Y., Halpin, C., Rauch, S. D. Department of Otolaryngology, Chang Gung Memorial Hospital, Keelung, Taiwan. *Otology & Neurotology* (2003), September, Vol. 24 (5), pp. 728–33, ISSN: 1431-7129
OBJECTIVE: To describe 10 years of experience with sudden sensorineural hearing loss and compare the outcomes with and without treatment with oral corticosteroids. STUDY DESIGN: Retrospective review of medical records SETTING: Large specialty hospital, Department of Otolaryngology. PATIENTS: Patients presenting with sudden onset (72 hours) unilateral sensorineural hearing loss, with no evidence of Ménière's Disease, acoustic injury, retrocochlear disease, and other specifiable disorders. INTERVENTIONS: The majority of patients received a standard course of oral corticosteroids (Prednisone 60 mg and

taper). A smaller group declined treatment. MAIN OUTCOME MEASURES: Recovery of hearing sensitivity was measured using standard audiometry and reported as change in Pure Tone Average. Word recognition scores were also analyzed. RESULTS: When severe-to-profound cases are analyzed, a significant improvement ($p<.01$) in Pure Tone Average is seen in cases treated with steroids versus those untreated. When milder cases are included, a statistical floor effect prevents differentiation of these groups. Word recognition scores were significantly improved ($p<.05$) in the treated group. CONCLUSIONS: Application of steroid medication significantly improves the recovery outcomes in cases of severe sudden sensorineural hearing loss.

Hearing loss after intratympanic gentamicin therapy for unilateral Ménière's Disease. Martin, E., Perez, N. Department of Otolaryngology, Hospital Case de Salud, Valencia, Spain. *Otology & Neurotology* (2003), September, Vol. 24 (5), pp. 800–6, ISSN: 1531-7129.
OBJECTIVE: This study set out to evaluate the hearing changes that occur during intratympanic gentamicin therapy and to correlate them with the long-term effects of the treatment on the control of vertigo and on hearing. STUDY DESIGN: This was a prospective study. SETTING: Tertiary medical centre. PATIENTS; The 71 patients included in the study had been diagnosed with unilateral Ménière's Disease as defined within the 1995 American Academy of Otolaryngology – Head and Neck Surgery guidelines, and had been refractory to medical treatment for at least one year. INTERVENTION: Intratympanic injections of gentamicin at a concentration of 27 mg/ml were performed at weekly intervals until indications of vestibular hypofunction appeared in the treated ear. If there was a recurrence of the episodes of vertigo, an additional course of injections was performed. MAIN OUTCOME MEASURE: The 1995 American Academy of Otolaryngology – Head and Neck Surgery criteria for reporting the treatment outcome for Ménière's disease were used. During the period of gentamicin instillation, weekly audiograms were obtained. The results of the treatment were expressed in terms of control of vertigo and hearing level. RESULTS: Vertigo was controlled by gentamicin instillation in 83.1 per cent of the 71 patients. Two years after the treatment, hearing loss as a result of the gentamicin injections was observed in only 11 (15.5 per cent) patients. The recurrence of spells of vertigo after having initially achieved complete control was noted in 17 (23.9 per cent) patients. Hearing loss at the end of the treatment occurred in 32.4 per cent of the patients, but it was transitory so that three months after ending the treatment it was 12.7 per cent and after two years it was 15.5 per cent. Those patients in whom no change in their level of hearing occurred during the treatment needed another course of injections and presented poorer overall control of vertigo. CONCLUSION: Ending weekly intratympanic injections when clinical signs of vestibular deafferentation appear results in the control of vertigo in the majority of patients. The hearing changes detected during the treatment are transitory and are the only clinical sign that predicts the response to gentamicin instillation.

Paediatric endoscopic sinus surgery (PESS): review of the indications. Bernal, S. M., Massegur, S. H., Tomas, B. M. Hospital Clini, Servicio de ORL, C/Villarroel 170, E-08036 Barcelona, Spain. mbernal@clinic.ub.es. *Revue de Laryngologie – Otologie – Rhinologie* (2003), Vol. 124 (3), pp. 145–50, Refs: 31, ISSN: 0035-1334.
Functional endoscopic sinus surgery (FESS) differs in children and adults. The purpose of this article is to highlight the differences by focusing on the anatomical landmarks and diagnostic and surgical peculiarities present in children. We review the indications of FESS in children, partially based on our personal experience, in order to establish a list of relative and absolute indications for the procedure. We also discuss controversies such as the overuse of FESS for chronic sinusitis and the potential post-operative alterations of pneumatization. The paper includes a retrospective study of our results with endoscopic dacryocystorhinostomy (DCR) in 31 children and the endoscopic removal of 11 juvenile angiofibromas. All patients were reviewed in the out-patients' clinic Patency of DCR was evaluated by fluorescein dye application to the conjunctiva, endoscopy with a 2.7 mm rigid endoscope or by means of clinical parameters, such as tearing or recurrent dacryocystitis. For patients operated on for a juvenile angiofibroma endoscopy of the nose and MRI every six months for the first two years were scheduled. Functional outcome showed good overall results in 90.3 per cent of DCR after primary surgery. The endoscopic approach to juvenile angiofibromas achieved a cure rate of 90.9 per cent after a follow-up of at least 24 months.

The use of speech therapy in the treatment of globus pharyngeus patients. A randomized controlled trial. Khalil, H. S., Bridger, M. W., Hilton, P. M., Vincent, J. Departments of Otolaryngology – Head and Neck Surgery, Derriford Hospital, Plymouth, United Kingdom. hkhalil@breathemail.net. *Revue de Laryngologie – Otologie – Rhinologie* (2003), Vol. 124 (3), pp. 187–90, ISSN: 0035-1334.
INTRODUCTION: Globus sensation is a common condition accounting for about four per cent of new referrals to an ENT clinic. A review of current theories on the cause of globus sensation concludes that no single aetiology is responsible. Wareing *et al.* believed that globus sensation might in part be associated with excessive laryngeal and pharyngeal tension. The aim of this study was to substantiate in a controlled prospective manner the results of a non-controlled study by the same authors that certain speech therapy techniques improved globus symptoms. METHODS: 1. Thirty-six patients with typical globus pharyngeus symptoms were randomized to treatment with speech therapy (Study group) and reassurance by nurse practitioner (Control group). The following data was collated for each patient: duration and type of globus symptoms (sense of a lump in the throat/throat irritation), severity of globus symptoms on a visual analogue scale, fibreoptic laryngoscopy, full blood count, barium swallow. 2. At the end of three months, patients in both groups marked on the visual analogue scale the severity of their symptoms. RESULTS: There was a significant improvement in the globus symptom scores in the speech therapy group compared to pre-intervention scores ($p<0.001$, Wilcoxon rank test). There was also a significant improvement in globus symptoms in the speech therapy group compared to controls ($p<0.001$, Mann–Whitney U test). CONCLUSION: Initial results suggest that patients with globus pharyngeus symptoms benefit from speech therapy.

Vestibular dysfunction in adult patients with osteogenesis imperfecta. Kuurila, K., Kentala, E., Karjalainen, S., Pynnoenen, S., Kovero, O., Kaitila, I, Grenman, R., Waltimo, J. Department of Otorhinolaryngology – Head and Neck Surgery, Vaasa Central Hospital, Finland. kaija.kuurila@vshp.fi. *American Journal of Medical Genetics* (2003), July 30, Vol. 120A (3), pp. 350–8, ISSN: 0148-7299.
Progressive hearing loss is a major symptom in osteogenesis imperfecta (OI), a genetic brittle bone disease. Vertigo is frequently associated with otosclerosis in which the hearing loss clinically resembles that in OI. Vertigo is also common in basilar impression (BI) found in up to 25 per cent of adult OI patients. In order to evaluate the cause, frequency, and characteristics of vertigo in OI, 42 patients were studied by interview, clinical examination, and audiological examination supplemented with electronystagmography (ENG) and lateral skull radiography. Audiometry showed hearing loss in 25 patients (59.5 per cent). Nine patients (21 per cent) displayed abnormal skull base anatomy in the forms of basilar impression, basilar invagination, or both, all designated here as BI. Twenty-two patients (52.4 per cent) reported vertigo, mostly of floating or rotational sensation of short duration. Patients with hearing loss tended to have more vertigo than patients with normal hearing. Vertigo was not correlated with type of hearing loss or auditory brain-stem response (ABR) pathology. ENG was abnormal in 14 patients (33.3 per cent). No dependency was found between vertigo and deviant ENG results. Patients with BI tended to have more vertigo than patients with normal skull base but the difference was not statistically significant. Neither ENG pathology, nor the presence or type of hearing loss showed correlation with BI. In conclusion, vertigo is common in patients with OI. In most cases, it may be secondary to inner ear pathology, and in only some patients does BI explain it. Since some OI patients without BI or hearing loss also suffer from vertigo, further clinical and neurological studies are needed to define the pathogenesis of vertigo in OI. Copyright 2003 Wiley-Liss, Inc.

Johnson-McMillin syndrome, a neuroectodermal syndrome with conductive hearing loss and microtia: report of a new case. Schweitzer, D. N., Yano, S., Earl, D. L., Graham, J. M. Jr. Medical Genetics Birth Defects Center, Ahmanson Department of Pediatrics, Los Angeles, California 90048, USA. *American Journal of Medical Genetics* (2003), July 30, Vol. 120A (3), pp. 400–5, ISSN: 0148-7299.

In 1983, Johnson *et al*. described 16 related individuals with alopecia, anosmia or hyposmia, conductive hearing loss, microtia and/or atresia of the external auditory canal, and hypogonadotrophic hypogonadism inherited in an autosomal dominant pattern. Other less constant manifestations included facial asymmetry, mental retardation, congenital heart defect, cleft palate, and choanal stenosis. An isolated case was reported later (Johnston *et al.* (1987: *Am J Med Genet* 26: 925–927)) and thereafter an affected mother and son (Hennekam and Holtus (1993: *Am J Med Genet* 47: 714–716)). We describe an additional unrelated female patient with features resembling those of the previously reported cases. She presented with intrauterine growth deficiency, microcephaly, alopecia, bilateral microtia with canal atresia, conductive hearing loss, partial left facial palsy, posterior cleft palate, left choanal stenosis, tetralogy of Fallot, developmental delay, and right thumb polydactyly. Because the phenotypic abnormalities in this syndrome affect the brain, facial structures, ectoderm and its derivatives, outflow tract of the heart, and Rathke's pouch derivatives, this has suggested to previous authors aetiological involvement of the ectoderm and neuroectoderm of the first and second branchial arches. Rathke's pouch, and the diencephalon. Microtia with conductive hearing loss differentiates the condition from other ectodermal dysplasias. In the initial report, females appeared somewhat less affected than males, and there was male-to-male transmission. The mother of our patient manifests subtle features, which suggest she may be a mildly affected female. Additionally, there is a family history of early-onset alopecia in the maternal grandfather's relatives.

Stabilized autologous fibrin-chondrocyte constructs for cartilage repair in vivo. Fussenegger, M., Meinhart, J., Hoebling, W., Kullich, W., Funk, S., Bernatzky, G. Department of ENT, Head and Neck Surgery, General Hospital, Wels, Austria. *Annals of Plastic Surgery* (2003), November, Vol. 51 (5), pp. 493–8, ISSN: 0148-7043.

Stablization of fibrin-chondrocyte constructs with fibrinolytical inhibitors has been shown to be a feasible method for the reconstruction of cartilage in vitro. In this study, the method was tested in vivo. Autologous cultures were used to form stabilized fibrin-chondrocyte constructs that were injected into auricular cartilage defects of rabbits. Stabilization was achieved by high doses of birinolytic inhibitors. Samples were prepared for magnetic resonance imaging, histology, and immunohistochemistry after one, two, four, and six months. Defects of the contralateral ear, which were treated with stabilized fibrin without cells, were used for controlled comparisons. In all cell-fibrin samples, cartilage like tissue was present. Immunohistochemistry revealed the presence of collagen II. This finding was similar for all observations. In the control samples, only minor new cartilage could be detected at the cut edges. The reconstruction of cartilage in vivo by injecting fibrin-chondrocyte constructs, stabilized with inhibitors of fibrinolysis, is thus possible.

Soft tissue deposits in neck dissections of patients with head and neck squamous cell carcinoma: prospective analysis of prevalence, survival, and its implications. Jose, J., Moor, J. W., Coatesworth, A. P. Johnston, C., MacLennan, K. Department of Otolaryngology, Head and Neck Surgery, Leeds General Infirmary, Leeds, England. *Archives of Otolaryngology – Head & Neck Surgery* (2004), February, Vol. 130 (2), pp. 157–60, ISSN: 0886-4470.

BACKGROUND: Soft tissue deposits of squamous cell carcinoma in the necks of patients with squamous cell carcinoma of the upper aerodigestive tract may represent either total effacement of a lymph node by carcinoma or extralymphatic deposits of carcinoma. There are few reports of their clinical or prognostic significance. METHODS: Data from 215 neck dissections from 155 patients with squamous cell carcinoma of the upper aerodigestive tract were studied prospectively to assess the prevalence of soft tissue deposits within the neck. The case notes of these patients were subsequently reviewed to analyze the effect on both the overall survival and recurrence-free survival. RESULTS: The prevalence rate for soft tissue deposits occurring alone was 10.3 per cent; the prevalence rate for soft tissue deposits occurring with extracapsular spread was 13.5 per cent. The overall prevalence rate for soft tissue deposits was 23.9 per cent. There was a statistically significant reduction in actuarial and recurrence-free survival in patients with soft tissue deposits compared with patients with pathologically node-negative necks ($p = .001$), and in patients with soft tissue deposits compared with those with pathologically node-positive necks without extracapsular spread ($p = .001$). No statistically significant differences were found between patients with soft tissue deposits and patients with pathologically node-positive necks with extracapsular spread, for actuarial survival or recurrence-free survival. CONCLUSIONS: In this series, soft tissue deposits were associated with an aggressive clinical course and poor survival. It is therefore important that histopathologists agree on a uniform terminology when reporting soft tissue deposits and actively look for their presence when examining neck dissection specimens.

Acute vestibular neuritis visualized by 3-T magnetic resonance imaging with high-dose gadolinium. Karlberg, M., Annertz, M., Magnusson, M. Department of Otorhinolaryngology – Head and Neck Surgery, Lund University Hospital, Lund, Sweden, mikael.karlberg@skane.se. *Archives of Otolaryngology – Head & Neck Surgery* (2004), February, Vol. 130 (2), pp. 229–32, ISSN: 0886-4470.

Sudden idiopathic unilateral loss of vestibular function without other signs or symptoms is called acute vestibular neuritis. It has been suggested that reactivation of human herpes simplex virus 1 could cause vestibular neuritis, Bell palsy, and sudden unilateral hearing loss. Enhancement of the facial nerve on gadolinium-enhanced magnetic resonance imaging (MRI) is a common finding in Bell palsy, but enhancement of the vestibular nerve has never been reported in acute vestibular neuritis. We present two consecutive cases of acute vestibular neuritis where high-field-strength MRI (3.0 T) with high-dose (0.3 mmol/kg of body weight) gadolinium-pentetic acid showed isolated enhancement of the vestibular nerve on the affected side only. These findings support the hypothesis of a viral and inflammatory cause of acute vestibular neuritis and might have implications for its treatment.

Cochlear implants in children: safety as well as speech and language. Clarke, G. The University of Melbourne, The Bionic Ear Institute, 384 Albert Street, East Melbourne 3002, Australia. gclark@bionicear.org. *International Journal of Pediatric Otorhinolaryngology* (2003), December, Vol. 67 Suppl 1, pp. S7–20, ISSN: 0165-5876.

The development of cochlear implants for children at the University of Melbourne and the Bionic Ear Institute, has consisted of a routine of biological and engineering safety followed by evaluation of speech processing strategies on adults before they are undertaken on children. The initial safety studies were to ensure that insertion was atraumatic, the electrical stimulus parameters did not lead to loss of ganglion cells and that the electrode could be inserted without the risk of middle-ear infection leading to meningitis. The initial second formant extraction scheme was shown to produce significant open-set speech understanding in adults and was approved by the US Food and Drug Administration (FDA) in 1985. Following this, an international study was undertaken for the FDA on children using a strategy that also included the first formant, and was approved in 1990. Additional advances in speech processing have been evaluated on adults. However, before using one with high rates of stimulation, it was tested for safety on experimental animals. Further advances have been anticipated in particular through the development of a peri-modiolar array, the Nucleus Contour. Prior to its use on adults, it was tested in the human temporal bone and found to lead to minimal trauma. It was evaluated in adults and found to lead to better current localization and lower thresholds. A study was undertaken in children using a spectral maxima scheme at high rates (advanced combination encoder (ACE)) and the Contour array as it had given best results in adults. It was approved as safe and effective for use in children in 2000. Studies were also undertaken to look at plasticity and visual dominance particularly through cognitive studies and the use of the McGuirk

effect. This demonstrated that deaf children with implants rely heavily on visual information and there is a great need to have unambiguous auditory stimuli to get best results.

Effects of otitis media with effusion (OME) on central auditory function. Moore, D. R., Hartley, D. E. H., Hogan, S. C. M. University Laboratory of Physiology, University of Oxford, Parks Road, Oxford OX1 3PT, UK. davem@ihr.mrc.ac.uk. *International Journal of Pediatric Otorhinolaryngology* (2003), December, Vol. 67, Suppl 1, pp. S63–7, ISSN: 0165-5876.
Conductive hearing loss attenuates and delays sound passing through the middle ear. This impairs binaural hearing and other central auditory functions dependent on high fidelity sound transmission. Persistent conductive loss leads to central impairments that persist after the peripheral loss has resolved. For example, children who have had multiple episodes of otitis media with effusion (OME) in the first few years of life may have poor detection of sounds in noisy environments, evidenced by reduced binaural unmasking (BU). Recent research shows that a 'threshold' level of OME is required to produce impaired BU. Children who had OME in one or both ears for more than about 50 per cent of the first five years had reduced BU. Animal research, using long-term ear plugging, suggests that total OME duration, rather than age at the time of having the disease, determines its effect on BU. Animals reared with bilateral (but not unilateral) ear plugs also have poor auditory temporal resolution, and reduced sensitivity to short tones in the presence of background noise, after plug removal. However, given time (six to 24 months) and training, all animals regained normal temporal resolution.

Immunology of tonsils and adenoids: everything the ENT surgeon needs to know. Brandtzaeg, P. Laboratory for Immunohistochemistry and Immunopathy, Institute of Pathology, University of Oslo, Rikshospitalet, Oslo N-0027, Norway. per.brandtzaeg@labmed.uio.no *International Journal of Pediatric Otorhinolaryngology* (2003), December, Vol. 67 Suppl 1, pp. S69–76, ISSN: 0165-5876.
The lymphoid tissue of Waldeyer's ring, and particularly the nasopharyngeal tonsil (adenoids), appears to be functionally comparable to nasal-associated lymphoid tissue in rodents. Antigen-stimulated lymphoid follicles give rise to: (a) clonal B-cell expansion; (b) B-cell receptor affinity maturation; (c) positive selection of B cells according to receptor affinity for antigen; (d) differentiation to B memory cells and plasma cells; and (e) variable induction of the joining (J)-chain gene. B-cell differentiation is also important to promote downstream isotype switching of the immunoglobulin (Ig) heavy chain constant genes. For tonsillar B cells, this process gives rise mainly to IgG and IgA plasma cells, partially associated with J-chain expression. Because the J chain is a key peptide in the polymer structure of secretory IgA, tonsils and adenoids may provide B cells for mucosal effector sites. Thus, several observations suggest that these lymphoid organs generate polymeric IgA (plA)-expressing B cells that migrate to the upper airway mucosa, lacrimal glands and salivary glands. Accordingly, the nasal route of vaccination induces secretory IgA-dependent regional mucosal immunity and will also enhance systemic immunity. Although the plgA-producing capacity of tonsillar B cells is considerably decreased in children with recurrent tonsillitis, a conservative attitude towards adenotonsillectomy appears immunologically desirable, particularly in the young age group.

The deaf child—challenges in management: a parent's perspective. Glover, D. M. diana.glover@btinternet.com. *International Journal of Pediatric Otorhinolaryngology* (2003), December, Vol. 67 Suppl 1, pp. S197–200, ISSN: 0165-5876.
Diana Glover lives in Buckinghamshire, UK with her husband, Ray, and their three sons, William (21), Robin (19) and Benjamin (10). Robin and Benjamin are profoundly deaf. Ray also has a hearing loss, which is unconnected with the children's deafness. Diana is a trustee of the National Deaf Children's Society. Diana will compare Robin's experiences with those of Benjamin. She will show how difficult it was to obtain a diagnosis of Robin's deafness, in spite of her early anxieties about his hearing, and that this had a marked impact on Robin's speech and language acquisition. She will speak about the struggle she and Ray had to convince their Local Education Authority that Robin should move from mainstream schooling to a boarding school for the deaf at the age of nine. She will also express her current anxieties as Robin, who has only deaf friends, moves from Mary Hare Grammar School for the Deaf to mainstream Higher Education. Robin's experiences will be contrasted with Benjamin's diagnosis at seven weeks and progress in mainstream education. Diana will also highlight some of the issues that she and Ray had to consider when they agreed that Benjamin should have a cochlear implant at the age of two. It will be demonstrated that having one hearing and two deaf sons has a profound effect on relationships within the family and with professionals. Diana will show how she and Ray have learned that one can easily overlook the needs of a hearing sibling, and that is equally important for deaf children to come to terms with their disability. She will summarise the difficult choices they have had to make over implantation, communication methods and schooling and demonstrate that, even within one family, the needs of deaf children are never the same.

Outbreak of *Pseudomonas aeruginosa* infections caused by commercial piercing of upper ear cartilage. Keene, W. E., Markum, A. C., Samadpour, M. Acute and Communicate Disease Program, Oregon Department of Human Services, Portland 97232, USA. william.e.keene@state.or.us *JAMA* (2004), February 25, Vol. 291 (8), pp. 981–5, ISSNA: 1538-3598.
CONTEXT: Sporadic infections following ear piercing are well documented, but common-source outbreaks are rarely recognized. OBJECTIVE: To investigate reports of auricular chondritis subsequent to commercial ear piercing. DESIGN, SETTING, AND SUBJECTS: Outbreak investigation by Oregon public health agencies, including cohort study of persons pierced at a jewellery kiosk in August-September 2000, environmental sampling, and molecular subtyping of isolates. Confirmed cases had *Pseudomonas aeruginosa* cultured from ear wounds. Suspected cases had signs and symptoms of external ear infection, including drainage of pus or blood for at least 14 days. MAIN OUTCOME MEASURES: Factors for infection and comparison of bacterial isolates by molecular subtyping. RESULTS: From 186 piercings in 118 individuals, we identified seven confirmed *P aeruginosa* infections and 18 suspected infections. Confirmed cases were 10 to 19 years old. Most were initially treated with antibiotics ineffective against *Pseudomonas*. Four were hospitalized, four underwent incision and drainage surgeries (one as an out-patient), and several were cosmetically deformed. Upper ear cartilage piercing was more likely to result in either confirmed or suspected infection than was lobe piercing (confirmed: RR undefined, $p<.001$; suspected: RR, 3.6; 95 per cent confidence interval, 1.5–8.5). All persons with confirmed infections had their ear cartilage pierced with an open, spring-loaded piercing gun. Patient isolates were indistinguishable by molecular subtyping, and matching isolates were recovered from a disinfectant bottle and nearby sink. At least one worker admitted sometimes spraying the disinfectant on the ear studs before piercing. CONCLUSIONS: Ear cartilage piercing is inherently more risky than lobe piercing. Clinicians should respond aggressively to potential auricular chondritis and consider *Pseudomonas* a possible cause pending culture results.