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Abstract Selection

Rhinitis in 10-year-old children and early life risk factors for its development. Arshad, S. H., Kurukulaaratchy, R. J., Fenn, M., Waterhouse, L., Matthews, S. The David Hide Asthma and Allergy Research Centre, St. Mary's Hospital, Newport, Isle of Wight, UK. sha@soton.ac.uk *Acta Paediatrica* (2002), Vol. 91 (12), pp. 1334–8.
AIM: To study the prevalence, characteristics of and risk factors for childhood rhinitis. METHODS: In a whole population birth cohort study (n = 1,456) the prevalence and characteristics of rhinitis among 10-year-old children were examined. At this age 1373 children (94 per cent) completed standardized questionnaires, 1,043 (72 per cent) skin-prick testing, 953 (65 per cent) serum inhalant immunoglobulin E antibody screening and 784 (54 per cent) methacholine bronchial challenges. RESULTS: At the age of 10 years the prevalence of hayfever ever was 18.6 per cent and current nasal symptoms (rhinitis) 22.6 per cent. Rhinitis at 10 years was largely seasonal and associated with low morbidity, although 62.7 per cent of cases required pharmacological treatment. Atopy (positive skin test) and other allergic states were associated with rhinitis (p 0.001). Wheeze or diagnosed asthma was higher with coexistent rhinitis. Among wheezing children physician-diagnosed asthma (p 0.024) and inhaled corticosteroid use (p 0.001) were greater with the presence of rhinitis. Significant bronchial hyperresponsiveness (methacholine concentration giving a 20 per cent fall in forced expiratory volume in 1 s 4.0 mg ml^{-1}) was greater if rhinitis was present even when the child did not wheeze (p 0.001). Risk factor analysis for rhinitis identified the independent significance for atopy (p 0.001) and eczema ($p = 0.009$) at the age of four years plus paternal rhinitis (p 0.001), maternal rhinitis ($p = 0.033$) and maternal food allergy ($p = 0.016$). CONCLUSION: Rhinitis is common at the age of 10 years, with strong associations with atopy, wheezing, asthma and bronchial hyperresponsiveness. An inherited predisposition towards atopy appears to predominate over environment in the aetiology of this state.

AlloDerm tympanoplasty of tympanic membrane perforations. Downey, T. J., Champeaux, A. L., Silva, A. B. Departments of Otolaryngology–Head and Neck Surgery, Madigan Army Medical Center, Tacoma, WA, USA. timothy.downey@nw.amedd.army.mil. *American Journal of Otolaryngology* (2003) January–February, Vol. 24 (1), pp. 6–13.
PURPOSE: To study the effectiveness of AlloDerm (LifeCell Corporation, Branchburg, NJ) as a graft material in underlay tympanoplasty by comparison to autologous fascia in a chronic tympanic membrane perforation animal model. MATERIALS AND METHODS: Seventeen chinchillas underwent creation of bilateral chronic tympanic membrane perforations over a six week period. Twenty-two stable perforations were divided equally between the experimental AlloDerm and control fascia graft groups. The grafts were surgically placed through a postauricular tympanomeatal flap. The tympanic membranes were examined at four and 10 weeks and then harvested for histopathological analyis. Tympanoplasty operative times, perforation closure rates, and gross and histological analyses were compared between the AlloDerm and fascia grafts. RESULTS: A statistically significant difference in mean surgical time was recorded between the AlloDerm (47 minutes) and fascia (68 minutes) grafting procedures (t test, $p = 0.001$). Perforation closure was achieved in 90 per cent of the AlloDerm and 100 per cent of the fascia treated tympanic membranes. Gross and histopathologic inspections revealed no significant differences. Microscopically, AlloDerm and fascia grafts had similar inflammatory responses, but AlloDerm showed increased fibroblast infiltration and neovascularization. CONCLUSION: The avoidance of donor site morbidity, reduction of surgical time, and excellent gross and histologic outcomes in this animal model reveal that AlloDerm could be a safe, cost-effective alternative to autologous fascia. Further study would be necessary in human clinical trials.

Mastoid obliteration by BMP-2/collagen composites: an experimental study using tissue engineering. Nishizaki, K., Tsujigiwa, H., Takeda, Y., Yoshino, T., Maeta, M., Fukushima, K., Nagatsuka, H., Nagai, N. Departments of Otolaryngology–Head and Neck Surgery, Okayama University Graduate Schools, Okayama, Japan. nishizak@cc.okayamau.ac.jp. *American Journal of Otolaryngology* (2003) January–February, Vol. 24 (1), pp. 14–8.
PURPOSE: Several materials have been used in the application of mastoid cavity obliteration during surgery for cholesteatoma; however, nothing has won universal acceptance. Through the advancement of tissue engineering, bone morphogenetic protein-2 (BMP-2)/collagen composites have been elucidated as inducers of heterogenic bone formation. This study was performed to investigate whether these composites are potentially obliteration materials for use in the mastoid cavity by using an animal experimental study. MATERIALS AND METHODS: The composites were implanted in the rate mastoid to investigate whether new bone would be tissue engineered in the mastoid and, if so, whether the newly formed bone was stable. The composites were examined histologically over a 24-week period. RESULTS: The composites implanted in the rat mastoid were able to tissue engineer new bone, and the newly formed bone was stable as assessed histologically, with almost normal bone structure, that was not resorbed during the 24-week period. Adverse immunological reactions were not found during our observation. CONCLUSIONS: Bone that was tissue engineered by the BMP-2/collagen composites was stable as assessed by histological examination and persisted in the rat mastoid. The present study shows that the composites have the potential to become real materials for use in mastoid obliteration.

Comparison of facial nerve function results after translabyrinthine and retrosigmoid approach in medium-sized tumors. Mamikoglu, B., Esquivel, C. R., Wiet, R. J. Division of Otolaryngology/Neurotology and Evanston Research Institute, Evanston Northwestern Healthcare, Evanston, IL, USA. *Archives of Otolaryngology–Head and Neck Surgery* (2003) April, Vol. 129 (4), pp. 429–31.
OBJECTIVE: To compare postoperative facial nerve function results according to surgical approach. STUDY DESIGN: Retrospective case review study. SETTING: All surgical procedures were conducted in collaboration with a neurosurgery team in teaching hospitals with an academic affiliation. PATIENTS: Patients with medium to large vestibular schwannomas, with the tumour size ranging from 2 to 3 cm. Ninety-eight patients were identified from an 'Acoustic Neuroma Database' (date range of search, 1983-2000). MAIN OUTCOME MEASURES: The House-Brackmann scale was used for grading facial function in the immediate postoperative period and one year after. Guidelines of the American Academy of Otolaryngology–Head and Neck Surgery were used for classification of hearing preservation. RESULTS: Of the 98 patients, 17 were operated on through a retrosigmoid approach and 81 through the translabyrinthine route. The mean ± SD ages of these two groups of patients were 46 ± 13 and 51 ± 14 years, respectively; mean ± SD tumour sizes were 2.5 ± 0.27 and 2.6 ± 0.28 cm, respectively. One year after tumour removal via retrosigmoid approach, 10 (59 per cent) of the 17 patients had good (grade I-II) facial functions and two (12 per cent) had poor (grade V-VI) function. In the translabyrinthine group, 54 (68 per cent) of 79 patients (two patients had subtotal total tumour removal) had good facial nerve function at the end of the one year follow-up, and 13 (17 per cent) continued to have poor facial function. The difference between these groups was not statistically significant (p>0.05). Hearing was preserved in four (24

per cent) of the 17 patients in the retrosigmoid group. CONCLUSION: Although the translabyrinthine approach may offer better long-term facial function compared with the retrosigmoid approach in patients with medium-sized tumours, the difference between these two groups was not significant enough to favour one approach over the other.

Endoscopic laser-assisted excision of juvenile nasopharyngeal angiofibromas. Mair, E. A.,, Battiata, A., Casler, J. D. Otolaryngology Service, Walter Reed Army Medical Center, Washington, DC, USA. eric.mair@lackland.af.mil. *Archives of Otolaryngology–Head and Neck Surgery* (2003) April, Vol. 129 (4), pp. 454–9.
BACKGROUND: Juvenile nasopharyngeal angiofibromas (JNAs) are highly vascular tumours that originate in the nasopharynx of young males. The primary treatment is surgical excision. Traditional surgical approaches are associated with significant morbidity and facial deformity. We introduce and outline the clinical advantages of an endoscopic surgical approach to JNAs using the Nd:YAG laser with image-guided surgery. DESIGN: Case series. SETTING: Tertiary care medical center. PATIENTS AND METHODS: Our study included five male patients (age range, eight to 21 years) with extensive JNAs. Their tumours were large and ranged from Fisch stage IIA to IIIA. Embolization of tumour-feeding vessels was performed before surgery. The tumours were photocoagulated via a transanasal endoscopic approach using a Nd:YAG laser. Devascularized, laser tumour was removed with a microdebrider. Image-guided navigation systems were used to assist skull base tumour removal, and sublabial and buccolabial incisions were used as needed to gain lateral endoscopic tumour access. Endoscopic tumour margins were obtained for frozen section. RESULTS: All patients achieved symptomatic remission, with no complications. No blood transfusions were necessary. The patients were ready for discharge one to two days after surgery. Postoperative and magnetic resonance imaging scans showed two skull base recurrences, which were removed endoscopically. Follow-up ranged between two to three years. CONCLUSIONS: Traditional external surgical approaches to large JNAs may result in significant morbidity. Laser-assisted image-guided endoscopic excision of JNAs is a safe and effective minimally invasive invasive surgical treatment. Its distinct advantages include (1) diminished blood loss, (2) superior cosmesis without observed altered facial growth, (3) direct access of skull base with minimal morbidity, and (4) ease of endoscopic follow-up.

Screening nasopharyngeal carcinoma by detection of the latent membrane protein 1 (LMP-1) gene with nasopharyngeal swabs. Hao, S. P., Tsang, N. M., Chang, K. P. Department of Otolaryngology, Chang Gung Memorial Hospital, Chang Gung University, Taipei, Taiwan, Republic of China. shengpo@adm.cgmh.org.tw. *Cancer* (2003) April 15, Vol. 97 (8), pp. 1909–13.
BACKGROUND: Nasopharyngeal carcinoma (NPC) is a common head and neck cancer in Taiwan. The goals of the current study were to investigate whether a nasopharyngeal swab technique could provide enough DNA for polymerase chain reaction (PCR) analysis of the Epstein-Barr virus (EBV)-derived latent membrane protein 1 (LMP-1) gene and to determine the feasibility and reliability of diagnosing NPC by detection of LMP-1 in the nasopharynx. METHODS: 320 adults underwent nasopharyngoscopy and nasopharyngeal swab to obtain cells for the LMP-1 PCR assay; some patients also underwent nasopharyngeal biopsy. RESULTS: An amount of DNA that was sufficient for PCR was extracted from 96.3 per cent of the swab samples. By detecting LMP-1 in nasopharyngeal swabs, NPC was diagnosed with a false positive rate of 12.7 per cent (seven of 55 patients), a false negative rate of 1.6 per cent (four of 253 patients), sensitivity of 87.3 per cent (48 of 55 patients), specificity of 98.4 per cent (249 of 253 patients), a positive predictive value of 92.3 per cent (48 of 52 patients), and a negative predictive value of 97.3 per cent (249/256 patients). NPC was diagnosed by nasopharyngoscopy with a false positive rate of 38 per cent (30 of 79 patients), a false negative rate of 0.4 per cent (one of 241 patients), sensitivity of 62 per cent (49 of 79 patients), specificity of 99.6 per cent (240 of 241 patients), a positive predictive value of 98 per cent (49 of 50 patients), and a negative predictive value of 88.9 per cent (240 of 270 patients). Only seven (0.2 per cent) of 256 patients with a diagnosis other than NPC had LMP-1 detected in the nasopharyngeal space. CONCLUSIONS: Detecting EBV genomic LMP-1 by nasopharyngeal swab diagnosed NPC with 87.3 per cent sensitivity and 98.4 per cent specificity. EBV genomic DNA usually is not detected by PCR-based methods in the nasopharyngeal space. Its incidence is estimated to be as low as 0.2 per cent among the general population. The nasopharyngeal swab coupled with PCR-based EBV LMP-1 detection could serve as part of a screening program for high-risk populations.

A comparative study of the optical characteristics of commonly used sinoscopes: do you know where you are looking? Kang, S. K., White, P. S., Cain, A. University Department of Otolaryngology, Ninewells Hospitals and Medical School, Dundee, UK. *Clinical Otolaryngology and Allied Sciences* (2003) February, Vol. 26 (1), pp. 14–7.
Endoscopic ethmoidectomy is a delicate operation on the thin, honey-comblike laminae of the ethmoidal sinuses. A high degree of precision is required to minimize disruption of the natural sinus mucociliary clearance system and to reduce the risk of orbital and skull base complications. It is therefore important that surgeons are aware of variation in the optical characteristics of the rod-lens telescopes produced by different manufacturers. A simple but precision endoscope goniometer was designed and manufactured. This was used to carry out a comparative study of the sinus telescopes in common use. The results showed significant variation in the view angle of the four brands of telescopes (Karl Storz, Olympus, Richards Smith Nephew, the Richard Wolf) tested. Differences in the position of the horizon in the visual field, and different degrees of visuospatial distortion were evident. We also noted and measured the blind angle of telescopes, which, by virtue of a high degree of angulation, cannot view the horizon.

Evaluation of speech in people with head and neck cancer: a pilot study. McKinstry A., Perry, A. Department of Speech Pathology, The Alfred Hospital, Prahran, Australia. *International Journal of Language and Communication Disorders* (2003) January–March, Vol. 38 (1), pp. 31–46.
BACKGROUND: A paucity of information exists on the effects of cancer on speech, with what little literature exists focussing on the effects of treatment. Baseline assessment of speech in head and neck cancer patients before treatment is important to distinguish accurately the effects of treatment from the effects of the cancer itself. AIMS: This prospective study had four major foci: (1) to determine if speech intelligibility and motor speech functions of patients with head and neck cancer before treatment differed from the normal population; (2) to determine if impairments in speech intelligibility and motor speech functions were specific to the original site of cancer; (3) to determine which motor speech functions were most related to overall speech intellibility; and (4) to determine whether there was a relationship between self-report of speech intelligibility, motor speech functions and the clinical assessment thereof. This study aimed incidentally to determine whether the Frenchay Dysarthria Assessment is a practicable, valid and reliable tool for assessing speech functions in the head and neck cancer population. METHODS PROCEDURES: Twenty participants, between 47 and 76 years of age and all newly diagnosed with a cancer of the head and neck, participated in the pilot study. In examining speech, participants completed a self-report questionnaire pertaining to speech intelligibility and motor speech functions and were then assessed clinically using subscales of the Frenchay Dysarthria Assessment before the start of cancer treatment. The motor speech functions examined included: respiratory ability and functions of the lip, soft palate, larynx and tongue. OUTCOMES RESULTS: Results indicated that participants with head and neck cancer had a greater reduction in both speech intelligibility and in almost all aspects of speech when compared with the normal population. Results further demonstrated that the site of the cancer dictated the type of impairment experienced with respect to speech function. Not all motor speech characteristics correlated with overall speech intelligibility and, lastly, self-report and clinical assessment were significantly correlated with respect to motor speech characteristics, but they differed slightly in the assessment of speech intelligibility. CONCLUSIONS: This pilot study has highlighted the critical importance of collecting baseline measures and reporting functional results according to the cancer site in future research. It has also shown the usefulness of the Frenchay

Dysarthria Assessment as a practicable, valid and reliable protocol of motor speech assessment for the head and neck cancer population.

Making bone: implant insertion into tissue-engineered bone for maxillary sinus floor augmentation – a preliminary report. Schmelzeisen, R., Schimming, R., Sittinger, M. Department of Oral and Craniomaxillofacial Surgery, University Hospital Freiburg, Freiburg, Germany. kloesel@zmk2.ukl.unifreiburg.edu. *Journal of Cranio-Maxillo-Facial Surgery* (2003) February, Vol. 31 (1), pp. 34–9.
Autologous, allogenic and alloplastic materials for bony reconstruction in the cranio-maxillofacial area have many drawbacks thus stimulated the on-going search for new (bio-)materials. Whereas cultivated skin and mucosa are already in clinical routine use in head and neck reconstruction, so far there has been no successful clinical application to the best of our knowledge of periosteum-derived, tissue-engineered bone for augmentation of the edentulous posterior maxilla. In a pilot study, augmentation of the posterior maxilla was carried out using a bone matrix derived from mandibular periosteal cells on a polymer fleece. This paper demonstrates fabrication of the matrix, clinical application, and the histological results in two patients. The results suggest that periosteum-derived osteoblasts on a suitable matrix form lamellar bone within four months which allows reliable implant insertion.

Association of proliferative activity and size in acoustic neuroma: implications for timing of surgery. Bedavanija, A., Brieger, J., Lehr, H. A., Maurer, J., Mann-Wolf, J. Department of Otorhinolaryngology and Pathology, University Hospital, School of Medicine, Mainz, Germany. *Journal of Neurosurgery* (2003) April, Vol. 98 (4), pp. 807–11.
OBJECT: Acoustic neuroma is the most frequent benign tumour of the cerebellopontine angle, and surgery is still the most common form of treatment. To gain better insight into the dysregulated mechanisms causing growth of acoustic neuroma, the authors studied the proliferative activity of 34 consecutive samples by analysing immunohistochemical staining with Ki-67 and proliferating cell nuclear antigen (PCNA), and apoptosis based on the terminal deoxynucleotidyl transferase-mediated deoxyuridine triphosphate nickend labelling. Data from these analyses were correlated with clinical parameters (that is, tumour size, duration of symptoms, and patient age). METHODS: Apoptotic cells were found in none of the tumours. Proliferation measured on staining with Ki-67 and PCNA correlated with tumour size, but not with patient age or duration of symptoms. The authors demonstrated that tumours 18 mm or smaller in diameter have lower proliferation indices and growth rates, compared with tumours larger than 18 mm with high proliferative indices and growth rates. Additionally, they observed that these more aggressive, larger tumours occur mostly in patients younger than 50 years of age. CONCLUSIONS: Patients with tumours larger than 18 mm in diameter and who are younger than 50 years of age sustain an enhanced risk for fast-growing tumours because of these lesions' enhanced proliferative activity. For these patients the authors recommend active therapy.

Adult supraglottitis subsequent to smoking crack cocaine. Osborne, R., Avita, S., Zandifar, H., Brown, J. Department of Otolaryngology–Head and Neck Surgery, Charles R. Drew University of Medicine and Science, Los Angeles, USA. rfozborne@aol.com. *Ear, Nose and Throat Journal* (2003) January, Vol. 82 (1), pp. 53–5.
Supraglottitis is one possible complication of smoking crack cocaine. From 1992 through 2001, our institution treated nine patients for thermal supraglottitis secondary to crack cocaine inhalation. In this article, we describe two of these cases, and we briefly review what is known about this entity and the mechanism of injury. We also provide our recommendations for management.

Modified tubeless anesthesia during endoscopy for assessment of head and neck cancers. Ku, P. K. M., Tong, M. C. F., Kwan, A., van Hasselt, C. A. Division of Otorhinolaryngology, Department of Surgery, Chinese University of Hong Kong, Prince of Wales Hospital, Shatin, N.T., Hong Kong, SAR. *Ear, Nose and Throat Journal* (2003) February, Vol. 82 (2), pp. 121–5.
We evaluated a modified technique of administering anesthesia without a tube and with spontaneous respiration during video-assisted tele-laryngo-tracheo-broncho-endoscopy (TLTBE). The endoscopy was performed as an alternative to rigid ventilatory bronchoscopy during screening for synchronous tumours in the tracheobronchial tree in patients who had head and neck malignancies. Thirty consecutive patients who required diagnostic panendoscopy were selected for this study. During direct-suspension laryngoscopy, anesthesia was delivered by administering intravenous bolus injections of propofol at 0.5 to 2 mg/kg every five to 10 minutes. A good view of the larynx, trachea, and main bronchi was obtained with a 50 cm zero degree telescope, which caused no obstruction of the airway. During laryngoscopy, arterial oxygen saturation levels, pulse rates, and blood pressures were stable in all patients. No apnea was associated with the use of propofol during any procedure, and we observed no intraoperative or postoperative complication in any patient. Video-assisted TLTBE is appropriate for patients with a grade 1 or 2 larynx, good cardiopulmonary function, and no significant airway obstruction. It is a safe and time-saving alternative to rigid ventilatory bronchoscopy for staging primary tumours and for screening for synchronous tumours in the respiratory tract.

Pharyngoesophageal reconstruction with lateral thigh free flap. Baek, C. H., Kim, B. S., Son-Young, Ik, Ha, B. Department of Otorhinolaryngology–Head and Neck Surgery, Sungkyunkwan University School of Medicine, Samsung Medical Centre, Seoul, Korea. chbaek@smc.samsung.co.kr. *Head and Neck* (2002) November, Vol. 24 (22), pp. 975–81.
BACKGROUND: We evaluated the use of a lateral thigh free flap in pharyngoesophageal reconstruction, which is often overlooked and less widely used despite its distinct advantages. METHODS: This study reviewed the patient's medical records, including the patient's age, gender, histopathologic diagnosis, surgical defects, flap size, flap survival, donor and recipient site complications, and swallowing function and voice rehabilitation. RESULTS: Twelve lateral thigh free flaps were used to primarily reconstruct the pharyngoesophagus in 11 patients after tumour resection from July 1997 to May 1999. Eleven of the 12 flaps (91.7 per cent) were transferred successfully. In one patient, the flap failure occurred as a result of venous thrombosis, and therefore another lateral thigh free flap from the opposite thigh was used three days later. The swallowing function was restored in all patients. Prosthetic voice rehabilitation was successfully achieved in all five patients, who primarily underwent tracheoesophageal punctures. No frank fistula or stricture developed. Significant donor site morbidity was not noted. CONCLUSIONS: The lateral thigh free flap is useful and reliable in selected cases of pharyngoesophageal reconstruction and versatile in flap design with favourable functional outcomes of swallowing and voice rehabilitation with minimal donor site morbidity.

Use of hearing aids in the management of children with cleft palate. Maheshwar, A. A., Milling, M. A. P., Kumar, M., Clayton, M. I., Thomas A. Department of Otorhinolaryngology and Head and Neck Surgery, Royal Gwent Hospital, Newport NP20 2UB, UK. maheshwar_arcot@hotmail.com. *International Journal of Pediatric Otorhinolaryngology* (2002) October 21, Vol. 66 (1), pp. 55–62.
OBJECTIVE: The incidence of otitis media with effusion in children with cleft palate is high. There are numerous reports looking at early insertion of ventilation tubes (VT) with associated complications. We believe that this is the first paper that discusses the use of hearing aids (HA) as the first line of management. METHODS: Children with cleft palate are managed in a special multidisciplinary clinic in our hospital. Detailed records of these children are maintained. We studied the otological management of 70 children with repaired cleft palate. RESULTS: Twelve of the 70 (17.1 per cent) had VT inserted, 17 (24.3 per cent) were provided with HA, 14 (20 per cent) had both grommets and HA and 27 (38.6 per cent) had neither. Of the 31 (44.3 per cent) children who had HA, 16 (51.6 per cent) had good compliance with the HA. The hearing, speech and language developments in these children have been good. Twelve of the 70 patients (17.1 per cent) have had one or more otological complications. These were significantly higher in children treated with VT. CONCLUSION: We have successfully treated 62.9 per cent of our patients with non-surgical intervention, and show a low incidence of long term complications.

Epistaxis due to traumatic internal carotid artery aneurysm. Hadfield, P. J., Gane, S. B., Leighton, S. E. Department of ENT, Great Ormond Street Hospital for Children, London WC1N 3JH, UK. *International Journal of Pediatric Otorhinolaryngology* (2002) November 11, Vol,. 66 (2), pp. 193–6.
Epistaxis due to internal carotid artery (ICA) trauma is uncommon, and that due to aneurysm of the artery is rarer still. Most cases result in fatality due to severe, uncontrolled blood loss. The ICA is vulnerable to oropharyngeal trauma as it ascends beside the lateral pharyngeal wall. We describe a case of an 11-month-old girl who sustained oropharyngeal wall trauma from the handle of a wooden spoon. After a characteristic latent period of several days, upper airway obstruction occurred due to a right parapharyngeal mass, which extended inferiorly to the level of the larynx. Angiography confirmed a large dissecting ICA aneurysm. This was treated successfully by radiological coil occlusion.

Establishment of a bone-anchored auricular prosthesis (BAAP) program. Rotenberg, B. W., James, A. L., Fisher, D., Anderson, J., Papsin, B. C. Department of Otolaryngology, The Hospital for Sick Children, 555 University Avenue, Toronto, Ontario, Canada M5G 1X8. *International Journal of Pediatric Otorhinolaryngology* (2002) December 2, Vol. 66 (3), pp. 273–9.
OBJECTIVE: Bone-anchored auricular prosthesis (BAAPs) are indicated for treatment of congenital or acquired microtia in children. This paper reports on our experience in establishing a BAAP program, including treatment algorithms, protocols and a discussion of the methodology, complications and patient satisfaction. METHODS: Eleven consecutive children using BAAPs were reviewed. Outcome measures include patient selection criteria, long-term stability of the BAAP, skin reactions around the site, and patient satisfaction. RESULTS: A patient selection program was developed and implemented, followed by a management protocol for surgery and follow-up. All children (100 per cent) achieved osseointegration, with only one site revision necessary. A variable degree of skin irritation was noted in just over one third (39 per cent) of cases. All children were satisfied with their prosthesis. CONCLUSIONS: The use of BAAPs in a pediatric population is a safe and viable method to correct disfiguring microtia. The final result is generally very acceptable to the child.

Synchronous fat plug myringoplasty and tympanostomy tube removal in the management of refractory otorrhoea in younger patients. Liew, L., Daudia, A., Narula, A. A. Department of Otorhinolaryngology–Head and Neck Surgery, Leicester Royal Infirmary, Leicester LE1 5WW, UK. lennyliew@ukgateway.net. *International Journal of Pediatric Otorhinolaryngology* (2002) December 2, Vol. 66 (3), pp. 291–6.
OBJECTIVE: Tympanostomy tubes are associated with many complications, the most common being recurrent otorrhoea, in many cases resistant to medical treatment. With the associated vestibulo-cochlear toxicity of many topical antibiotics, their use is dose limited. Removal of the tympanostomy tube has been shown to cure the otorrhoea, however, it is associated with a high persistent perforation rate of 10–28 per cent. A synchronous fat plug myringoplasty was performed with tube removal in an attempt to reduce the residual perforation rate. METHODS: A retrospective study of 13 consecutive children, nine male and four female, mean age 9.1 years (median = 9, range two to 15), with a total of 15 ears (left = 6, right = 9) had either Shah Tubes (n = 5), Shepard Tubes (n = 1) or Shah Long Term Tubes (n = 9) in situ for middle ear effusions. The tubes were removed for recurrent otorrhoea. The tubes had been in situ for a mean of 38.8 months (median = 31, range 9–84 months) All ears had recurrent infections, with a variable response to topical antibiotics. All were under the care of one specialist, who performed all the procedures. At the time of tube removal, a standard fat graft myringoplasty was done. RESULTS: The procedure was successful in 15 of the 15 ears, and all perforations had closed by three weeks. Pure tone audiometry improved in 11 ears, remained the same in two and worsened in two (0–10 and 11–15 dBA, respectively). There were no complications arising from the procedure. Mean follow up was 13.7 months (median = 9, range 3–31). None of the patients have reperforated, but two have required re-ventilation of their middle ear for middle effusions, and one of these two has also undergone subsequent adeno-tonsillectomy. CONCLUSIONS: Our experience in this small series shows that the removal of a tympanostomy tube for recurrent otorrhoea can be successfully managed with a fat plug myringoplasty, with the benefit of a reduction in the persistent perforation rate following tympanostomy tube removal. It is a simple technique that requires little extra operating time with no significant morbidity.