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Abstract selection

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JOURNAL OF OCCUPATIONAL MEDICINE
JOURNAL OF TROPICAL PEDIATRICS

Immunological changes associated with a successful outcome of pollen immunotherapy. Fennerty, A. G., Jones, K. P., Davies, B. H., Fifield, R., Edwards, J. Asthma Research Unit, Sully Hospital, South Glamorgan, Wales. *Allergy* (1988) Aug, Vol. 43 (6), pp. 415–9.
Changes in immunological measurements thought to be important in the mechanism of immunotherapy for hay fever were related to objective measurements of treatment outcome. Antigen-specific IgE and IgG, and T suppressor cell status, using monoclonal antibodies and a specific functional assay, were measured before and after immunotherapy. Treatment outcome was assessed using nasal and conjunctival challenge tests. Seventeen subjects received immunotherapy for six months. Nine showed a decrease in nasal and/or conjunctival sensitivity, compared with two of 13 control subjects (P less than 0.05). Subjects responding to immunotherapy had a significantly higher post treatment IgE level and a higher pre- and post-treatment IgG level than non-responders and controls. Immunotherapy had no effect on suppressor cell status. Author.

Intramuscular betamethasone dipropionate vs. topical beclomethasone dipropionate and placebo in hay fever. Laursen, L, C., Faurschou, P., Munch, E. P. Lung and Allergy Department, Frederiksberg County Hospital, Copenhagen, Denmark. *Allergy* (1988) August, Vol. 43 (6), pp. 420–4.
A double-blind, double-dummy comparative study was made of 30 adult birch pollen-allergic outpatients with seasonal rhinoconjunctivitis. They were treated with either topically applied beclomethasone dipropionate 100 micrograms in each nostril twice daily for four weeks, placebo, or an injection of 2 ml. of a suspension containing 5 mg. betamethasone dipropionate and 2 mg. betamethasone disodium phosphate per ml. (Diprospan) immediately prior to the birch pollen season. Placebo- and topical steroid-treated patients experienced an increase in rhinoconjunctivitis symptoms, i.e. nasal blockage, nasal-itching, rhinorrhea, sneezing and eye symptoms, and placebo-treated patients used significantly more antihistamine tablets during the pollen season. Diprospan-treated patients experienced fewer symptoms on all measured parameters. We concluded that one injection of Diprospan immediately prior to the birch pollen season produces significantly fewer rhinoconjunctivitis symptoms than does placebo and topical steroid treatment. Author.

Hearing loss and desferrioxamine in homozygous beta-thalassemia. Albera, R., Pia, F., Morra, B., Lacilla, M., Bianco, L., Gabutti, V., Piga, A. ENT Department, University of Turin, Italy. *Audiology* (1988) Vol. 27 (4), pp. 207–14.
The authors present the results obtained during an audiometric screening of 153 children aged 5-18 years, affected by beta-thalassemia and treated with regular blood transfusions and iron overload chelation by means of desferrioxamine. 38 per cent of the patients showed a significant sensorineural hearing loss at high frequencies with recruitment. Younger patients had a greater hearing loss, indicating that cochlear damage was not due to the disease itself. Furthermore, hearing loss appeared to be correlated with the mean and peak desferrioxamine doses administered and was higher in subjects with lower iron load. Thus, the ototoxic effect seems to have been higher when a good iron chelation had been obtained. Among our patients, conductive hearing loss was not more frequent than in patients without beta-thalassemia. Author.

Prognosis and therapy of early acute idiopathic auditory failure. Russolo, M., Bianchi, M. Department of Otolaryngology, University of Trieste, Italy. *Audiology,* (1988) Vol. 27 (4), pp. 215–216.
The prognostic value of otovestibular parameters was evaluated in 46 cases of acute idiopathic hypoacusis (AIH) and 12 cases of acute idiopathic anacusis (AIA) observed within seven days of the onset. Recovery in AIH is predicted by some otoneurological parameters as mean pure-tone hearing threshold (PTA) for 500, 1,000 and 2,000 Hz, stapedial reflex and severe vertigo. None of these measures alone seems to have prognostic value. The expected recovery rate also is reflected in the various parameters taken as a whole. Subjects with mean PTA better than 70 dB HL together stapedius reflex present for 500 and 1,000 Hz, no decay and no vertigo have a very favourable prognosis: 86 per cent had complete or good recovery. On the contrary, subjects with mean PTA worse than 70 dB HL and with pathological stapedius reflex have a generally unfavourable prognosis: 35 per cent had complete or good recovery. Vertigo as a symptom does not seem in itself to have an unfavourable prognostic value. Actually, patients with severe vertigo generally have a poor recovery. Vertigo as a symptom indeed is frequently associated with a more severe sensorineural lesion. Carbogen or heparin-dextran are not an effective treatment: complete-good global recoveries obtained in AIH without any treatment, with carbogen or with heparin-dextran were, respectively, 65, 68 and 62 per cent. As a consequence, an early therapy with these substances has no apparent value. Patients affected with AIA have a very unfavourable prognosis. All of our patients with AIA had poor recovery. For the moment we feel it is easier to reach a satisfactory prognosis rather than to institute an effective or causal therapy in acute idiopathic auditory failure. Author.

Magnetic resonance imaging of acoustic neuromas: the role of gadolinium-DTPA. Stack, J. P., Ramsden, R. T., Antoun, N. M., Lye, R. H., Isherwood, I., Jenkins, J. P. Department of Diagnostic Radiology, University of Manchester. *British Journal of Radiology* (1988) Sept, Vol. 61 (729), pp. 800–5.
Magnetic resonance imaging (MRI) was performed in 20 patients with evidence on computed tomography (CT) of 21 acoustic neuromas before and after intravenous administration (0.1-0.2 mmol./kg. body weight) of gadolinium-diethylene-triamine-pentaacetic

acid (Gd-DTPA). Multi-section spin-echo (SE) sequences of varying repetition (TR) and echo (TE) times were performed in the transverse and coronal planes with a section thickness of 10 mm. All acoustic neuromas displayed marked enhancement on the TI-weighted (short TR/TE) SE sequence post-Gd-DTPA. The intrameatal component was particularly well demonstrated compared with non-enhanced magnetic resonance (MR) images and contrast-enhanced CT. Identification of intrameatal tumour was difficult on T2-weighted SE images and one tumour was not identified on the TI-weighted SE sequence prior to Gd-DTPA. Four of five intrameatal tumours measuring less than 8 mm. could only be demonstrated on CT by using CT air meatography. Extrameatal tumour extension was demonstrated on contrast-enhanced CT, although the assessment of brain-stem involvement and displacement was not as clearly seen as on coronal MR images. In two patients with large acoustic neuromas and a cyst, the true relationship of the cyst to the tumour could only be identified on the post-Gd-DTPA scan. Magnetic resonance imaging with gadolinium-DTPA is a relatively quick, safe, well tolerated and effective method for the diagnosis of acoustic neuroma. Author.

Hyperparathyroidism after neck irradiation. Christmas, T. J., Chapple, C. R., Noble, J. G., Milroy, E. J., Cowie, A. G. Department of Urology, Middlesex Hospital, London, UK. *British Journal of Surgery* (1988) Sep, Vol. 75 (9), pp. 873–4.
A retrospective review of 1,550 cases of hyperparathyroidism (HPT) treated surgically over a 30-year period reveals a past history of exposure to neck irradiation in 10 cases (0.7 per cent). The indication for radiotherapy was benign disease in nine and papillary thyroid carcinoma in one case. The mean interval between radiation exposure and the detection of HPT was 32 years (range 3-63 years). Patients treated with radioactive iodine alone developed HPT after a mean of five years while the interval for those treated with external beam therapy alone was a mean of 44 years. The parathyroid histology was adenoma in six cases, carcinoma in three cases and nodular hyperplasia in one case. All patients had coincident benign thyroid disease and another with follicular carcinoma. Neck irradiation has been shown to confer an increased risk of HPT due to parathyroid adenoma and carcinoma. Radiotherapy for benign disease has generally been abandoned and these cases demonstrate a further contra-indication for the use of neck irradiation. Author.

A study of the late effects of radiotherapy and operation on patients with maxillary cancer. A survey more than 10 years after initial treatment. Sakai, S., Kubo, T., Mori, N., Itoh, M., Miyaguchi, M., Kitaoku, S., Sakata, Y., Fuchihata, H. Department of Otolaryngology, Kagawa Medical School, Japan. *Cancer* (1988) Nov 15, Vol. 62 (10), pp. 2114–7.
One hundred seventy-one maxillary carcinoma patients who survived more than 10 years after initial treatment were surveyed. Performance status was unrestricted in 35.1 per cent of the patients, slightly restricted in 34.5 per cent, moderately restricted in 21.1 per cent, restricted in 7.0 per cent, and very restricted in 2.3 per cent. Radiation-induced cataracts on the affected side occurred in 100 per cent of the patients treated with radiation. Good visual acuity was maintained in only 65.8 per cent of the patients, even on the contralateral side. 55 per cent of the patients retained symmetric facial animation due to our policy of conservative therapy. Restricted mouth opening occurred in 32.2 per cent of the patients, taking liquid diet in 21.1 per cent and middle ear effusion in 26.3 per cent, which were closely linked to maxillectomy operation. This study suggests that avoiding excess radiation dosage, strict control of radiation field, adaption of two portals with 60 grades wedge pair filter, use of appropriate protectors, limiting removal at the maxillectomy, and postoperative care for trismus or tympanic effusion are necessary. Author.

Long-term survival after endobronchial fire during treatment of severe malignant airways obstruction with the Nd: YAG laser. Denton, R. A., Dedhia, H. V., Abrons, H. L., Jain, P. R., Lapp, N. L., Teba, L. Pulmonary Disease Section, West Virginia University Medical Center, Morgantown. *Chest* (1988) Nov, Vol. 94 (5), pp. 1086–8.
We present a case of Nd:YAG laser treatment of nearly total airway obstruction by malignant tumor in which an endobronchial fire occurred. The patient survived without complications of the fire and was followed-up until death over 22 months after the fire. The events leading to the fire are presented and recommendations provided to prevent similar occurrences. Author.

Pulmonary edema due to upper airway obstruction in adults. Willms, D., Shure, D. Division of Pulmonary and Critical Care Medicine, University of California, San Diego. *Chest* (1988) Nov, Vol. 94 (5), pp. 1090–2.
A report of pulmonary edema following acute upper airway obstruction in an adult is presented, and the literature involving 25 additional cases is reviewed. This form of pulmonary edema appears to be related to markedly negative intrathoracic pressure due to forced inspiration against a closed upper airway resulting in transudation fluid from pulmonary capillaries to the interstitium. Postanesthetic laryngospasm is the most common cause of pulmonary edema in adults (11/26 cases). The edema usually clears rapidly with supportive care. Aggressive diagnostic and therapeutic interventions may be avoided if the syndrome is recognized. Maintenance of oxygenation and a patent airway are the mainstays of treatment. Author.

Abnormal airway function in individuals with the acquired immunodeficiency syndrome. O'Donnell, C. R., Bader, M. B., Zibrak, J. D., Jensen, W. A., Rose, R. M. Department of Medicine, New England Deaconess Hospital, Boston 02159. *Chest* (1988) Nov, Vol. 95 (5), pp. 945–8.
Pulmonary function test results of individuals with the acquired immunodeficiency syndrome (AIDS) were analyzed to determine the prevalence of abnormally low forced expiratory flow rates and bronchial hyperreactivity. Of 99 individuals with AIDS, a total of 44 (44 per cent) had either low forced expiratory flow rates or a significant response to inhaled bronchodilator. Thirty-one (31 per cent) individuals exhibited significant improvement in airflow rates after bronchodilator inhalation, while 33 (33 per cent) had low flow rates. Twenty (20 per cent) individuals had both low flow rates and a significant response to bronchodilator. In 83 per cent of symptomatic individuals treated with bronchodilators there was clinical improvement. Thus, we conclude that abnormally low forced expiratory flow rate with or without bronchial hyper reactivity is a common and treatable complication of AIDS. Author.

Synthetic vowel studies on cochlear implant patients. Tong, Y. C., Lim, H. H., Clark, G. M. Department of Otolaryngology, University of Melbourne, Parkville, Victoria, Australia. *Journal of the Acoustical Society of America* (1988) Sep, Vol. 84 (3), pp. 876–87.
Speech perception studies were conducted on three cochlear implant patients to investigate the relative merits of six speech processing schemes for presenting speech information to these patients. Electrical stimuli, described in this article as synthetic vowels, were constructed using tabulated data of formant frequencies of natural vowels. The six schemes differed in the number of formant frequencies encoded on the electrical signal dimension of electrode position, and/or in the range of electrode position used for encoding each formant frequency. Eleven synthetic vowels (i, I, E, ae, a, c, U, u, v, E, D) were used and were presented in a single-interval procedure for absolute identification. Single-formant vowels were used in two of the six schemes, two-formant vowels in three schemes, and three-formant vowels in the remaining scheme. The confusion matrices were subjected to conditional information transmission analysis on the basis of previous psychophysiological findings. Comparisons among the schemes in terms of the analyzed results showed that training, experience, and adaptability to new speech processing schemes were major factors influencing the identification of synthetic vowels. For vowels containing more than one formant, the information about each formant affected the perception of the other formants. In addition, there appeared to be differences between the perceptual processes for vowels containing more than one formant and the processes for single-formant vowels. Taking into consideration the effects of training, experience, and adaptability, the three-formant speech processing scheme appeared, on the basis of perceptual performance comparisons among the six schemes, to be the logical choice for implementation in speech processors for cochlear implant patients. Author.

On the measurement of glottal flow. Cranen, B., Boves, L. Institute of Phonetics, Nijmegen University, The Netherlands. *Journal of the Acoustical Society of America* (1988) Sep, Vol. 84 (3), pp. 888–90.
For developing a comprehensive description of voiced speech sounds in terms of a phonation and an articulation component, it is necessary to know to what extent the volume flow modulations at the entrance of the vocal tract are due to vocal fold motions and to what extent they are due to variations in the transglottal pressure. In order to be able to study this problem, it is important that the flow at the glottis can be measured during normal speech production in a reliable fashion. In this article, a flow measurement technique is described that differs from the more usual inverse filtering approach to the extent that the flow is not measured at the mouth, but much closer to the glottis. The technique is based on the measurement of pressure gradient. It is shown that the proposed method also leads to an inverse filtering problem, but that, since this problem is much simpler, the gradient method yields more reliable estimates of the shape of the glottal flow waveform, though without the zero flow level (dc component) and without a magnitude scale. By means of theoretical considerations about velocity profiles in pulsatile flow in cylindrical tubes, it is shown that the method for measuring flow during phonation proposed in this article may be expected to yield reasonable flow waveform estimates in a frequency region from any normal fundamental frequency to an upper frequency determined by the transducer sensitivity and separation and vocal tract geometry. In this case, the frequency limitation was estimated to be 1000 Hz. (ABSTRACT TRUNCATED AT 250 WORDS) Author.

A comparative study of brain-stem auditory evoked potentials and blink reflexes in posterior fossa tumor patients. Zileli, M., Idiman, F., Hiccdonmez, T., Ovul, I., Tunccbay, E. Department of Neurosurgery, Aegean University Faculty of Medicine, Bornova, Izmir, Turkey. *Journal of Neurosurgery* (1988) Nov, Vol. 69 (5), pp. 660–8.
Brain-stem auditory evoked potentials (BAEP's) and blink reflexes (BR's) were recorded from 40 patients with clinical and radiological evidence of posterior fossa tumors. They were examined in three groups according to the anatomical location of the lesion: Group A included 15 patients with midline tumors; Group B included 14 patients with cerebellar hemispheric tumors; and Group C included 11 patients with cerebellopontine angle (CPA) tumors. More of the 40 patients had BAEP abnormalities (32) than BR abnormalities (24). All of the 11 patients with CPA tumors had some kind of BAEP and BR abnormalities. The 14 patients with cerebellar tumors showed the next most frequent abnormalities: 12 related to the BAEP's and seven to the BR's. The 15 patients with midline tumors showed the least number of abnormalities: nine related to BAEPs and six to the BR's. In the analysis of BAEP wave latencies and interpeak latencies, a wave III latency delay occurred in all groups; latencies of waves IV and V were more significantly delayed in patients with CPA and cerebellar hemispheric tumors, and the interpeak latencies of waves III-V and I-V were markedly prolonged only in patients with CPA tumors (p less than 0.01). In all tumor groups, early response (RI) of BR's was significantly delayed in comparison to a healthy volunteer control group (p less than 0.01), but R1 was more pronounced in cases of CPA tumors when compared with the other tumor groups. Although significant delays in direct and consensual late reflex components (R2) of BR's were noted in comparison to the control group, this delay could not differentiate one tumor group from another. It can be concluded that, while these tests reflect the functions of different cranial nerves and brain-stem tracts, BAEP monitoring is more sensitive than BR testing for the detection of brain-stem involvement in posterior fossa tumors. Cerebellopontine angle tumors almost always cause severe abnormalities in both tests. Cerebellar hemispheric tumors and midline tumors cause fewer changes in both BAEP's and BR's. Author.

Otitis media in early childhood and its relationship to later phonological development. Roberts, J. E., Burchinal, M. R., Koch, M. A., Footo, M. M., Henderson, F. W. Frank Porter, Graham Child Development Center, University of North Carolina, Chapel Hill. *Journal of Speech and Hearing Research* (1988) Nov, Vol. 53 (4), pp. 424–32.
The relationship between otitis media during the first 3 years of life and subsequent speech development was examined in 55 socioeconomically disadvantaged children who attended a research day care program. The children were participants in a longitudinal study of child development in which the number of episodes of otitis media and the duration of each otitis episode were reported prospectively from infancy. Standardized tests of speech were administered between the ages of 2½ and 8 years. No significant relationship was found between otitis media in early childhood and number of common phonological processes or consonants in error used during the preschool years. However, the number of days of otitis media before age 3 was associated with the total number of phonological processes used by children between the ages of 4½ and 8 years. Although these findings suggest that phonological processes after age 4½ tend to drop out more slowly for children with a history of otitis media than of children without histories, no consistent patterns were observed for individual phonological processes or for the total number of consonants in error in this age range. Author.

Diagnostic radiology of maxillary sinus defects. Perez, C. A., Farman, A. G. Department of Primary Patient Care, School of Dentistry, University of Louisville, Ky. *Oral Surgery, Oral Medicine, Oral Pathology* (1988) Oct, Vol. 66 (4), pp. 507–12.
Simulated radiolucent and radiopaque defects were placed in the maxillary sinus. Periapical dental radiographs could detect radiopacities of 0.25 mm. in diameter; however, such defects were not revealed by occlusal radiography or the posterio-anterior view. Panoramic dental radiographs detected simulated radiopaque lesions more frequently than the other techniques tested, but generally distorted the position of the defect and consistently did not reveal radiolucent defects. Computerized tomography proved to be the most accurate technique used in detection of simulated lesions on all the surfaces of the maxillary sinus. Author.

Bronchoscopic findings in infants treated wtih high-frequency jet ventilation versus conventional ventilation. Kercsmar, C. M., Martin, R. J., Chatburn, R. L., Carlo, W. A. Case Western Reserve University, Cleveland, OH. *Pediatrics* (1988) Dec, Vol. 82 (6), pp. 884–7.
To identify tracheobronchial abnormalities associated with assisted ventilation, 40 infants with respiratory distress syndrome randomized to receive either short-term (48 hours) conventional or high-frequency jet ventilation were studied. Flexible fiberoptic bronchoscopy (n = 13) was performed and/or clinical and radiographic assessments were used to evaluate for laryngeal, tracheal, and bronchial lesions. There was no bronchoscopic evidence of necrotizing tracheobronchitis after either high-frequency jet ventilation (n = 8) or conventional ventilation (n = 5). Laryngotracheomalacia and nodular vocal cords were the most common abnormalities noted, and they occurred with equal frequency in both groups. Study infants who were not bronchoscoped had no clinical or radiographic evidence of tracheal or mainstem bronchial obstruction. One patient did have microscopic evidence of necrotizing tracheobronchitis at autopsy, however. It is concluded that short-term treatment of respiratory distress syndrome with high-frequency jet ventilation may be performed without undue risk of tracheobronchial injury. Author.

Shallow versus deep endotracheal suctioning in young rabbits: pathologic effects on the tracheobronchial wall. Bailey, C., Kattwinkel, J., Teja, K., Buckley, T. Department of Pediatrics, Children's Medical Center, University of Virginia, Charlottesville. *Pediatrics* (1988) Nov, Vol. 82 (5), pp. 746–51.
The traditional technique for endotracheal suctioning of intubated neonates consists of inserting a catheter until resistance is met, withdrawing slightly, and applying suction. The extent of tissue damage caused by the traditional (deep) technique v that caused by an alternative shallow technique was studied with an animal model. Six 3-week-old rabbits were anesthetized, intubated, and suctioned every 15 minutes for six hours by neonatal intensive care unit nurses who were unaware of the study purpose. Three rabbits were suctioned by means of the deep technique, whereas the other three received shallow suctioning achieved by inserting the catheter no further than a premeasured distance. Light microscopy showed significantly increased necrosis and inflammation following deep suctioning. Electron microscopy revealed greater loss of cilia and increased mucus with the deep technique. To confirm our initial assumption that the deep technique is still used extensively by neonatal intensive care units throughout the country, a mail survey

was conducted. Of the 405 (43 per cent) neonatal intensive care unit physicians who responded, 82 per cent reported frequent or exclusive use of the deep technique for routine suctioning. In this study, the fact that deep suctioning results in significantly more tracheobronchial pathology than does a shallow, premeasured technique is shown. It is recommended that nurseries change their current practice and adopt the shallow technique for routine suctioning of intubated neonates. Author.

Bilateral stage Ib glottic carcinoma: results of radiation therapy. Sinha, P. P. Department of Radiation Oncology, West Virginia University Medical Center, Morgantown 26506. *Radiology* (1988) Dec, Vol. 169 (3), pp. 835–8.
Bilateral early carcinoma of the true vocal cords (stage TIb-NOMO) makes up about 15 per cent of all stage I carcinomas. Twenty-four patients with stage Ib glottic carcinoma (18 with involvement of the anterior commissure and six without) received a radical course of radiation therapy with the median dose of 6,600 rad (66 Gy) in 33 fractions calculated at midpoint. In 19 patients (80 per cent) radiation therapy alone produced complete local control of the disease. In the 5 patients in whom treatment failed, the recurrent tumors were confined to the larynx and were noticed within 3 years of treatment. Surgery was subsequently performed in three of the patients but was successful in only one. In 19 of the 24 patients, the voice sounded relatively normal after radiation therapy. Author.

A microbiological study of acute maxillary sinusitis in Bloemfontein. Snyman, J., Claassen, A. J., Botha, P. L. Department of Otorhinolaryngology, University of the Orange Free State, Bloemfontein. *South African Medical Journal* (1988) Nov 5, Vol. 74 (9), pp. 444–5.
Microbiological analyses and antibiotic sensitivity tests were done on 26 patients with acute maxillary sinusitis during the first nine months of 1986. Positive cultures were obtained in 23 of the patients, with anaerobes cultured in 13 (50 per cent). Haemophilus influenzae was cultured in all non-producers of beta-lactamase. Therapy with erythromycin and chloromycetin appeared to be equally effective in aerobic cases and metronidazole was effective in all anaerobic cases. Author.

The site of the lesion causing deafness in multiple sclerosis. Barratt, H. J., Miller, D., Rudge, P. Medical Research Council Neuro-Otology Unit, Institute of Neurology, National Hospital, London, England. *Scandinavian Audiology* (1988), Vol. 17 (2), pp. 67–71.
A patient with multiple sclerosis who developed sequential hearing loss, first on the right, with recovery is discussed. Magnetic resonance imaging demonstrated lesions in the VIII nerve root entry zones which were thought to be responsible for the hearing loss. Author.

Individual differences in auditory electric responses: comparisons of between-subject and within-subject variability. II. Amplitude of brainstem Vertex-positive peaks. Lauter, J. L., Loomis, R. L. Central Institute for the Deaf, Washington University School of Medicine, St. Louis, MO 63110. *Scandinavian Audiology* (1988), Vol. 17 (2), pp. 87–92.
Recently, we (Lauter & Loomis, 1986) reported variability measures of the latency of five vertex-positive auditory brainstem response (ABR) peaks collected under a repeated-measures experimental design. Seven subjects were tested, each on eight separate sessions, for brainstem auditory evoked response to monaural right, monaural left, and binaural stimulus presentation. This paper presents variability measures for amplitudes of the same series of responses Three types of variability measurement were made: 1) amplitude of each peak of the response to monaural right, monaural left, and binaural stimulation; 2) amplitude difference for each peak comparing binaural with right, and binaural with left; and 3) amplitude difference comparing binaural with the sum of the amplitudes of the two monaural responses. As in the previous report, between-subject variability and within-subject variability were expressed using a ratio of mean divided by standard deviation (this is the reciprocal of Pearson's Coefficient of Variation, and will here be referred to as the Coefficient of Stability, or Cs). For all amplitude comparisons, Cs profiles indicate that: 1) within-subject stability (i.e., consistency) is significantly greater than between-subject stability, 2) both within- and between-subject stability measures are sensitive to both peak and ear of presentation, and 3) stability profiles for individual subjects show individual differences and similarities, and are replicable over time. The variability measure also provides evidence of an ear asymmetry at peak III which has been noted in other ABR studies. Author.

Delayed oto-acoustic emissions evoked by bone-conduction stimulation: experimental data on their origin, characteristics and transfer to the external ear in man. Rossi, G., Solero, P., Rolando, M., Olina, M. Institute of Audiology, Turin University, Italy. *Scandinavian Audiology* (Supplement) (1988) Vol. 29, pp. 1–24.
1) BCEOE have been obtained in subjects with normal hearing by 1 kHz tone-bursts; 2) the morphology of BCEOE varies from one subject to another, and is stable over the course of time. BCEOE do not display a linear relation between their amplitude and the intensity of the stimulus, whose spectral composition is the same as theirs; 3) by contrast with ACEOE, whose mean threshold is the same as that of the subjective tonal threshold for the same stimulus presented by the same stimulation modality, BCEOE threshold, on overage, is about 10 d B HTL higher; 4) this difference in threshold is not due to interference on the part of the controlateral ear, via the efferent fibres, since it is also observed in persons with unilateral anacusis. It is probably the outcome of unilateral competitive inhibition between two stimuli presented to the same ear at the same time. By bone-conduction stimulation in fact, when the meatus is occluded by the probe, as in our experimental situations, Corti's organ is reached by a supplementary contingent of mechanical energy generated by the vibration of the bony part of the meatus and transmitted by air conduction; 5) ACEOE cannot be obtained in otosclerotic subjects whereas they appear after surgery. BCEOE are obtained before surgery and increase in amplitude post-operatively; 6) the findings mentioned in point 5) clearly demonstrate that the ossicular chain plays an important, but not an essential role in the transfer of EOE from the inner to the external ear. Author.

Laryngeal cancer without spread to the neck: treatment options and outcome. Calhoun, K. H., Stiernberg, C.M., Hokanson, J. A., Quinn, F. B., Bailey, B. J. Department of Otolaryngology, University of Texas Medical Branch, Galveston 77550. *Southern Medical Journal* (1988) Nov, Vol. 81 (11), pp. 1369–74.
We examined treatment and outcome variables in patients who had laryngeal cancer without clinical evidence of spread to the neck. In our patient population, there was a 24 per cent overall recurrence rate for NO laryngeal cancer. Initial manifestations, including stage and location of tumor, did not influence recurrence (P greater than .1). Initial treatment of the primary T3 or T4 tumor with radiotherapy alone was positively correlated with recurrence (P less than .0 for T3, P less than .0) for T4), but initial treatment of the neck did not appear to affect chance of regional or distant recurrence (P greater than .1). Approximately half of the patients who had recurrent disease were salvaged. Neither chance of salvage nor final disease-free status was significantly associated with any of the variables (P greater than .1). Author.