

Abstract Selection

Bilateral Jejuno-mesenteric flap for reconstruction of complicated pharyngoesophageal defect. Yoshizaki, T., Maekawa, K., Tukatani, T., Shibutani, K., Nishimura, T., Omura, K., Urayama, H., Watanabe, Y., Furukawa, M. Department of Otolaryngology, School of Medicine, Kanazawa University, Zanazawa, Japan. *American Journal of Surgery* (2000) June, Vol. 179 (6), pp. 497–9. The surgical management of an infectious and fistulous wound with a pharyngoesophageal tumour is one of the greatest challenges for head and neck and plastic surgeons. The free jejunal transfer has been the standard technique for pharyngoesophageal reconstruction, and the standard technique for pharyngoesophageal reconstruction, and the free omental flap has been one of the most reliable methods for reconstructing contaminated wounds. A jejuno-mesenteric flap is suitable for such complicated wounds. Pharyngoesophageal defects are reconstructed by the jejunum, and contaminated and heavily irradiated neck wounds are covered with the mesenteric flaps connected with a revascularized jejunum. The technique described here possesses the advantages of both a free jejunal flap and an omentum flap. Therefore, it is a reliable method for reconstructing the pharyngoesophageal defects of complicated wounds.

Over-the-counter hearing aids: electroacoustic characteristics and possible target client groups. Cheng, C. M., McPherson, B. Department of Speech and Hearing Sciences, University of Hong Kong, China. *Audiology, Journal of Auditory Communication* (2000), March–April, Vol. 39 (2), pp. 110–6.

Over-the-counter hearing aids (OTCs) are those directly purchased from retail outlets, without the benefit of prior professional hearing health care. They are particularly common in developing countries. This study examined the amplification characteristics of a selected sample of OTCs to determine if any target client group or groups were suitable for the OTCs. The electroacoustical performance of 10 OTCs was measured. The measurements included saturated sound pressure level curve, high-frequency average full-on gain, frequency response, total harmonic distortion, equivalent input noise level, and input-output curve. The full-on gain curve of each hearing aid was used to estimate the hypothetical hearing loss of target clients for each aid as it would be calculated by four hearing aid prescription formulae. Real-ear probe tube measurements were also performed on 10 adult subjects to determine the amplification that could be achieved by the OTCs before audible feedback occurred. The OTC hearing aids were not able to meet the prescription gain requirements of the majority of elderly clients who usually purchased them.

Social competence and behavioural problems in children with hearing impairment. Anderson, G., Olsson, E., Rydell, A. M., Larsen, H. C. Department of Psychology, Uppsala University, Sweden. *Audiology, Journal of Auditory Communication* (2000) March–April, Vol. 39 (2), pp. 88–92.

The focus in this study is on social competence and behavioural problems in a group ($n = 57$) of hearing-impaired seven- to 12-year-old children. Results were related to hearing status, school placement, and gender. Parent and teacher questionnaires were used to measure two aspects of social competence, prosocial orientation and social initiative, and three aspects of behavioural problems, externalizing, internalizing, and concentration problems. A sample of 214 normally-hearing children was used as a comparison group. Overall, the results showed only minor differences between the two groups, with the exception that the hearing-impaired children showed less social initiative in parent ratings. There were no relationships between social functioning and hearing status or school placement (mainstream vs. special classes for hearing-impaired children) nor any clear pattern of gender differences. These findings indicate that hearing-impaired

children in Sweden fare well. The results are discussed in terms of the need for longitudinal studies and possible interventions targeted at social behaviours.

Effect of nasal-valve dilation on obstructive sleep apnea (see comments). Schonhofer, B., Franklin, K. A., Brunig, H., Wehde, H., Kohler, D. Krankenhaus Kloster Grafschaft, Zentrum fur Pneumologie, Beatmungs – und Schlafmedizin, Schmollenberg-Grafschaft, Germany. Bernd.Schoenhofer@t-online.de. *Chest* (2000), September, Vol. 118 (3), pp. 571–2.

OBJECTIVE: Nasal-valve dilation reduces nasal resistance and increases air flow. It is possible that this mechanism prevents hypopharyngeal collapse and sleep apneas. We investigated the effect of a plastic device (Nozovent; Prevancure AB; Vastra Frolunda, Sweden) – which dilates the nasal valve – on patients with obstructive sleep apnea (OSA). **DESIGN:** Prospective interventional study. **SUBJECTS:** Twentysix consecutive patients with OSA were included (22 men; mean \pm SD age, 54.8 ± 11.3 years; respiratory disturbance index (RDI), 34.4 ± 18.5 events/h; body mass index, 21.6 ± 5.7 kg/m²). **INTERVENTION:** The nasal dilator was inserted during sleep into the nares and fitted to exert a dilating force on the nasal valves by means of its elasticity. **MEASUREMENTS:** Polysomnographic studies were performed before and after one month of treatment. A responder is defined as one with a reduction in RDI to <50 per cent of the baseline value and RDI of < or = 10 events/h during treatment. **RESULTS:** Five patients dropped out. As a result, only 21 patients were analyzed. Four patients responded, and 17 patients were non-responders. In the whole population, neither the mean values for respiration during sleep nor sleep staging changed significantly with the device. **CONCLUSIONS:** The investigated nasal dilator had no effect on sleep-related breathing disorders in patients with moderate to severe OSA. The reduction in nasal resistance does not prevent hypopharyngeal obstruction.

MRI and CT in the differential diagnosis of pleural disease. Hierholzer, J., Luo, L., Bittner, R. C., Stroszczyński, C., Schroder, R. J., Schoenfeld, N., Dorow, P., Loddenkemper, R., Grassot, A. Klinik und Poliklinik fur Strahlenheilkunde, Charite Virchow-Klinikum, Humboldt Universitat zu Berlin, Germany. *Chest* (2000) September, Vol. 118 (3), pp. 604–9.

STUDY OBJECTIVE: To explore the role of MRI in the differential diagnosis of pleural disease. **PATIENTS:** Forty-two patients with pleural disease were included. **METHOD:** Retrospective study. All patients were examined with both CT and MRI. The morphologic features of pleural lesions and magnetic resonance signal intensity on T1-weighted, T2-weighted, and contrast-enhanced T1-weighted images were evaluated. **RESULTS:** Mediastinal pleural involvement, circumferential pleural thickening, nodularity, irregularity of pleural contour, and infiltration of the chestwall and/or diaphragm were most suggestive of a malignant cause both on CT and MRI. Pleural calcification on CT was suggestive of a benign cause. Contrary to what has been previously reported in the literature, neither on CT nor on MRI, pleural thickness >one cm revealed significant difference between malignant and benign pleural disease ($p > 0.05$, χ^2 test). High signal intensity in relation to intercostal muscles on T2-weighted and/or contrast-enhanced T1-weighted images was significantly suggestive for a malignant disease. Using morphologic features in combination with the signal intensity features, MRI had a sensitivity of 100 per cent and a specificity of 93 per cent in the detection of pleural malignancy. **CONCLUSION:** When signal intensity and morphological features are assessed, MRI is more useful and therefore superior to CT in differentiation of malignant from benign pleural disease.

Canalith repositioning for benign paroxysmal positional vertigo: a randomized, controlled trial. Asawavichianginda, S., Isipradit, P., Snidvongs, K., Supiyaphun, P. Department of Otolaryngology, Chulalongkorn University, Bangkok, Thailand. *Ear, Nose and Throat Journal* (2000) September, Vol. 79 (9), pp. 732–4, 736–7.

We assessed the efficacy of the canalith repositioning manoeuvre by comparing it with no treatment in a population of patients with benign paroxysmal positional vertigo (BPPV). In this randomized, controlled, six month efficacy trial, outcomes were measured subjectively by patients' reports of symptom status and objectively by Hallpike testing. During the first month of the study, the treated group experienced significantly better outcomes than did the control group, but this trend was not sustained at three and six months.

The contralateral bilobed trapezius myocutaneous flap for closure of large defects of the dorsal neck permitting primary donor site closure. Horch, R. E., Starck, G. B. Department of Plastic and Hand Surgery, Albert-Ludwigs-University Freiburg, Medical School, Germany. horch@chll.uni-freiberg.de. *Head and Neck* (2000), August, Vol. 22 (5), pp. 513–9.

BACKGROUND: Various reliable local flaps can be used to cover soft tissue defects of the posterior neck. Among others, the (either vertical or transverse) trapezius myocutaneous flap is a reliable option in this context. However, for defects with a diameter larger than 15 cm, these flaps require skin grafting of the donor site.

METHODS: To prevent this additional morbidity we describe a contralaterally based bilobed trapezius musculocutaneous flap successfully applied in two elderly patients with large tumours of the posterior neck in palliative situations. **RESULTS:** This novel approach makes use of a standard vertical skin paddle to cover the neck, together with a transverse cervical flap in a bilobed design to primarily close the paravertebral donor site. **CONCLUSIONS:** The neck wounds. Preservation of the accessory nerve to the superior fibers of the trapezius muscle permitted normal arm elevation in our patients.

Office-based laser assisted tympanic membrane fenestration in adults and children: pilot data to support an alternative to traditional approaches to otitis media. Siegel, G., Brodsky, L., Waner, M., Shaha, S. Department of Otolaryngology, Northwestern School of Medicine, Chicago, IL, USA. *International Journal of Pediatric Otorhinolaryngology* (2000) June 30, Vol. 53 (2), pp. 111–20.

OBJECTIVES: To determine the role of intermediate duration (approximately three weeks) middle ear ventilation using office-based laser assisted tympanic membrane fenestration in resolving an episode of otitis media with effusion in adults and children who otherwise would have been treated with insertion of pressure equalization tubes. **METHODS:** A retrospective chart review of 92 patients (162 ears) was conducted to identify the utility and technical challenges associated with laser assisted tympanic membrane fenestration in an office setting. Clinical characteristics reviewed included: age, gender, duration of effusion, season performed, and hearing and health status of middle ear upon healing of the fenestration. **RESULTS:** 69 per cent of those <three years; 70 per cent of those three to seven years; and 70 per cent of those 5–80 years. Some episodes recurred and at final follow-up 64 per cent had normal middle ear structure and function (range of follow-up = one to 18 months, mean 2.5 months, median 2.0). Shorter duration of effusion pre-fenestration was more often associated with return to normal middle ear structure and function ($p < 0.01$). Season performed, number of previous episodes of otitis media and pre-treatment tympanometry were not predictive of result. No significant complications were observed. **CONCLUSIONS:** The use of office-based laser assisted tympanic membrane fenestration is a reasonably safe and effective procedure for the treatment of otitis media in most adults and children. As a minimally invasive otologic procedure, laser assisted tympanic membrane fenestration has great potential to decrease the rates of both antibiotic usage and insertion of ear tubes.

Treatment of otitis media with effusion in children with mucopolysaccharidoses. Motamed, M., Thorne, S., Narula, A. Department of Otolaryngology Head and Neck Surgery, Leicester Royal Infirmary, UK. *International Journal of Pediatric Otorhinolaryngology* (2000), June 30, Vol. 53 (2), pp. 121–4.

Otitis media with effusion (OME) is a constant finding in children

with mucopolysaccharidoses (MPS). Affected children may also present the anaesthetist with a difficult airway. A seven year retrospective review of the management of OME in individuals with MPS was carried out. Nine patients were identified. All had a number of short-term ventilation tube insertions (one to four, mean two) before a diagnosis of MPS was made. Following diagnosis three required repeated short-term ventilation tubes insertions (two to four, mean three), four had long-term ventilation tube insertions once only. Five children who had residual hearing loss were provided with hearing aids but compliance was poor in two. Once a diagnosis of MPS has been made, a hearing aid, if compliant, or a long-term ventilation tube would be a better option than a short term one in order to minimise the anaesthetic risk. A 'watch and wait' policy is not recommended.

Prenatal diagnosis of airway compromise: EXIT (ex utero intrapartum treatment) and foetal airway surgery. Ward, V. M., Langford, K., Morrison, G. Department of ENT, Guys & St Thomas' Hospital, London, UK. *International Journal of Pediatric Otorhinolaryngology* (2000) June 30, Vol. 53 (2), pp. 137–41.

Four cases of potential airway obstruction diagnosed in the early antenatal period are presented. Their management is outlined, and the need for a multidisciplinary team approach to these problems is highlighted. The experience of the ex-utero intrapartum treatment (EXIT) procedure is presented, and the first attempt at intra-uterine tracheal surgery is introduced.

On the physics of the infant feeding bottle and middle ear sequelae: ear disease in infants can be associated with bottle feeding. Brown, C. E., Magnuson, B. Mt. Zion Family Care Center, Southern Illinois University School of Medicine, 1200 North State Highway 121, Mt. Zion, IL 62549 USA. ceb@fgi.net. *International Journal of Pediatric Otorhinolaryngology* (2000), August 11, Vol. 54 (1), pp. 13–20.

BACKGROUND: When using conventional feeding bottles, negative pressure is generated in the oral cavity, as well as, in the bottle when fluid is removed by sucking. The negative pressure inside the bottle causes the infant to suck excessively and the intraoral negative pressure may subsequently be transmitted to the middle ear via the eustachian tube. **METHODS:** In seven infants, simultaneous pressure recordings were performed in the feeding vessel and the middle ear using three types of feeding bottles. **RESULTS:** With conventional non-ventilated and under-ventilated bottles a negative pressure formed while the infant sucked and negative intratympanic pressure was frequently generated. **CONCLUSIONS:** It is suggested that this sequence of events may lead to secretory otitis and its accompanying consequences. In contrast, a fully ventilated bottle showed positive pressure throughout the feeding procedure, which is similar to normal breast-feeding, and negative pressure changes were not recorded in the middle ear.

Efficacy of three commonly used hearing air circuits: A crossover trial. NIDCD/VA Hearing Aid Clinical Trial Group. Larson, V. D., Williams, D. W., Henderson, W. G., Luethke, L. E., Beck, L. B., Noffsinger, D., Wilson, R. H., Dobie, R. A., Haskell, G. B., Bratt, G. W., Shanks, J. E., Stelmachowicz, P., Studebaker, G. A., Boysen, A. E., Donahue, A., Canalis, R., Fausti, S. A., Rappaport, B. Z. Howard Leight Industries, 7828 Waterville Road, San Diego, CA 92154, USA. vlarson@howardleight.com. *Jama* (2000), October 11, Vol. 284 (14), pp. 1806–13.

CONTEXT: Numerous studies have demonstrated that hearing aids provide significant benefit for a wide range of sensorineural hearing loss, but no carefully controlled, multicentre clinical trials comparing hearing aid efficacy have been conducted. **OBJECTIVE:** To compare the benefits provided to patients with sensorineural hearing loss by three commonly used hearing aid circuits. **DESIGN:** Double-blind, three-period, three-treatment crossover trial conducted from May 1996 to February 1998. **SETTING:** Eight audiology laboratories at Department of Veterans Affairs medical centers across the United States. **PATIENTS:** A sample of 360 patients with bilateral sensorineural hearing loss (mean age, 67.2 years, 57 per cent male; 78.6 per cent white). **INTERVENTION:** Patients were randomly assigned to one of six sequences of linear peak clipper (PC), compression limiter (CL), and wide dynamic range compressor (WDR) hearing aid circuits. All patients wore each of the three hearing

aids, which were installed in identical casements, for three months. **MAIN OUTCOME MEASURES:** Results of tests of speech recognition, sound quality, and subjective hearing aid benefit, administered at baseline and after each three month intervention with and without a hearing aid. At the end of the experiment, patients ranked the three hearing aid circuits. **RESULTS:** Each circuit markedly improved speech recognition, with greater improvement observed for soft and conversationally loud speech (all 52 dB and 62 dB conditions, $p < /+ = 0.001$). All three circuits significantly reduced the frequency of problems encountered in verbal communication. Some test results suggested that CL and WDRC circuits provided a significantly better listening experience than PC circuits in word recognition ($p = 0.002$), loudness ($p = 0.003$), overall liking ($p = 0.001$), aversiveness of environmental sounds ($p = 0.02$), and distortion ($p = 0.02$). In the rank-order ratings, patients preferred the CL hearing aid circuits more frequently (41.6 per cent) than the WDRC (29.8 per cent) and the PC (28.6 per cent) ($p = 0.001$ for CL vs both WDRC and PC). **CONCLUSIONS:** Each circuit provided significant benefit in quiet and noisy listening situations. The CL and WDRC circuits appeared to provide superior benefits compared with the PC, although the differences between them were much less than the differences between the aided vs unaided conditions. *JAMA* (2000);**284**:1806–13

Personality traits and psychological factors in voice pathology: a foundation for future research. Roy, N., Bless, D. M. Department of Communication Disorders, The University of Utah, Salt Lake City 84112-0252, USA. nelson.roy@health.utah.edu. *Journal of Speech, Language and Hearing Research* (2000) June, Vol. 43 (3), pp. 737–48.

It has been argued that personality, emotions, and psychological problems contribute to or are primary causes of voice disorders and that voice disorders in turn create psychological problems and personality effects. This article (a) briefly reviews the literature surrounding the role of psychological and personality processes in individuals with functional dysphonia (FD), vocal nodules (VN), and spasmodic dysphonia (SD); (b) provides an overview of recent concepts in personality and trait structure; and (c) summarizes the fundamental tenets of a theoretical synthesis proposed by Roy and Bless (2000) to explain the dispositional bases of FD and VN. This theory links FD and VN to the signal sensitivities and behavioral response biases of neurotic introverts and neurotic extraverts, respectively. In a companion article, the merits of the Roy and Bless theory are evaluated.

The effect of information on listeners' attitudes toward speakers with voice or resonance disorders. Lallh, A. K., Rochet, A. P. Capital Health, Edmonton, Alberta, Canada. alallh@cha.ab.ca. *Journal of Speech, Language, and Hearing Research* (2000) June, Vol. 43 (3), pp. 782–95.

This study investigated university students' attitudes toward women with voice or resonance disorders and whether providing listeners with information about those disorders affected their attitudes towards the women. Eighty students listened to speech samples of nine women: three with normal voice/resonance, three with moderate hoarseness/breathiness, and three with moderate hypernasality and nasal emission. Before listening to the speech samples, 40 students read two pages of information about the disorders, and 40 read two pages of neutral information. Attitudes were measured with 24 semantic differential scales. Results indicated that listeners perceived speakers with voice/resonance disorders more negatively than speakers without disorders. The attitudes of listeners who read voice and resonance information did not differ from those of listeners who read neutral information.

The dysphonia severity index: an objective measure of vocal quality based on a multiparameter approach. Wuytes, F. L., De Bodt, M. S., Molenberghs, G., Remacle, M., Heylen, L., Millet, B., van Lierde, K., Raes, J., Van de Heyning, P. H. University of Antwerp, Belgium. wuytes@uia.ua.ac.be. *Journal of Speech, Language, and Hearing Research* (2000) June, Vol. 43 (3), pp. 796–809. The vocal quality of a patient is modelled by means of a Dysphonia Severity Index (DSI), which is designed to establish an objective and quantitative correlate of the perceived vocal quality. The DSI is based on the weighted combination of the following selected set of voice measurements: highest frequency (F(0)-High in Hz), lowest intensity (I-Low in dB), maximum

phonation time (MPT in s), and jitter (percentage). The DSI is derived from a multivariate analysis of 387 subjects with the goal of describing, purely based on objective measures, the perceived voice quality. It is constructed as $DSI = 0.13 \times MPT + 0.053 \times F(0)\text{-High} + 0.26 \times I\text{-Low} - 1.18 \times \text{Jitter (Percentage)} + 12.4$. The DSI for perceptually normal voices equals +5 and for severely dysphonic voices -5. The more negative the patient's index, the worse is his or her vocal quality. As such, the DSI is especially useful to evaluate therapeutic evolution of dysphonic patients. Additionally, there is a high correlation between the DSI and the Voice Handicap Index score.

Cellular physiology of the vocal folds. Gray, S. D. Department of Surgery, Division of Otolaryngology – Head and Neck Surgery, University of Utah School of Medicine, Salt Lake City, Utah 84132, USA. pscgray@ihc.com. *Otolaryngologic Clinics of North America* (2000) August, Vol. 33 (4), pp. 679–98.

This article discusses cellular architecture and physiology relevant to phonation biology. The mucociliary blanket and its role in external vocal fold lubrication are presented. The epithelium, basement membrane zone, and lamina propria all have specific roles in oscillating tissue. Three cell types, fibroblast, myofibroblast, and macrophage, maintain important and unique roles. Protein turnover in the lamina propria is important, and slowing matrix turnover may be a leading factor in creating some of the characteristics associated with vocal senescence. Lastly, aspects of cellular health and cellular pathology are discussed.

Vocal fold physiology. Jiang, L., Lin, E., Hanson, D.G. Laryngeal Physiology Laboratory, Department of Otolaryngology – Head and Neck Surgery, Northwestern University Medical School, Chicago, Illinois 60611-3008, USA. jjiang@northwestern.edu. *Otolaryngologic Clinics of North America* (2000) August, Vol. 33 (4), pp. 699–718.

This article examines the physiologic factors responsible for the production of phonation in humans. The article begins with an explanation of the control mechanisms of phonation and theories of vocal fold vibration. The physiologic concepts are based on the myoelastic-aerodynamic, body-cover, and mucosal wave theories. An evaluation of the cover-body theory is explained in terms of pitch control. The factors that regulate the vocal folds to produce pitch changes, intensity variation, and register effects are outlined. The changes intensity variation, and register effects are outlined. The changes in pitch, intensity, and voice qualities are related to the vocal fold mass, tension, subglottic pressure, and airflow generated by the phonatory systems. A brief summary of abnormal voice production is given in terms of disordered phonology and the emerging theory of chaos.

New procedures for paralytic dysphonia: adduction arytenopexy, Goretex medialization laryngoplasty, and cricothyroid subluxation. Zeitels, S. M. Department of Otolaryngology and Laryngology, Harvard Medical School, Boston, Massachusetts, USA. *Otolaryngologic Clinics of North America* (2000) August, Vol. 33 (4), pp. 841–54.

Laryngoplastic phonosurgery has evolved to be a dominant treatment modality for paralytic dysphonia. The postoperative vocal outcome from the combined use of adduction arytenopexy, Goretex medialization laryngoplasty, and cricothyroid subluxation is such that most patients will have a normal phonation time and more than two octaves of dynamic range with minimal acoustic perturbation. With the addition of the adduction arytenopexy and cricothyroid subluxation procedures to the armamentarium of the phonosurgeon, all parameters for static reconstruction of the paralyzed vocal fold have been addressed.

Laryngeal manipulation. Rubin, J. S., Lieberman, J., Harris, T. M. Voice Disorders Unit, Royal National Throat, Nose, and Ear Hospital, Institute of Laryngology and Otolaryngology, University of London, London, England. *Otolaryngologic Clinics of North America* (2000) October, Vol. 33 (5), pp. 1017–34.

This article presents the authors' philosophy regarding the use of physical manipulation of the larynx and the neck in patients presenting the voice disorders from the context of the anatomy and physiology of the larynx. The biomechanics of the laryngeal structures are reviewed. Potential indications for manipulation are discussed. The examination of the larynx and perilaryngeal

structures is presented from a mechanical standpoint. Some basic tenets in laryngeal manipulation, including potential risks and contraindications, are offered.

Phonomicrosurgery I: principles and equipment. Zeitels, S. M. Department of Otolaryngology and Laryngology, Harvard Medical School, Boston, Massachusetts, USA. *Otolaryngologic Clinics of North America* (2000) October, Vol. 33 (5), pp. 1047–62.

Phonomicrosurgery arose from 19th century endolaryngeal surgery, which was done through a natural passage and was one of the earliest forms of minimally invasive procedural interventions. The evolution and growth of laryngology as a specialty is inextricably connected to the development of endoscopic laryngeal surgery. Phonomicrosurgical techniques have evolved in the last decade of the 20th century as group of procedures that are guided by physiologic principles of vocal fold oscillation so as to improve vocal outcome. The anatomic premise of these techniques is to maximally preserve the vocal fold's layered microstructure, epithelium, and lamina propria. Phonomicrosurgery has acquired increasing importance because a dependable voice has become a necessity in our communication-based society.

Phonomicrosurgery II: surgical techniques. Garrett, C. G., Ossoff, R. H. Department of Otolaryngology, Vanderbilt Voice Center, Nashville, Tennessee 37212, USA. *Otolaryngologic Clinics of North America* (2000) October, Vol. 33 (5), pp. 1063–70.

Optimal vocal outcome is the major goal of treatment of benign non-neoplastic vocal fold lesions. Current phonomicrosurgery techniques are based on a complete understanding of vocal fold anatomy and the physiology of vocal fold vibration. With the knowledge that these lesions typically involve the superficial layer of the lamina propria and not the overlying epithelium, dissection and excision should be limited to this layer. Vocal fold microflap techniques leave the overlying epithelium and the mucosal cover intact to minimize postoperative scarring and possible tethering to the underlying vocal ligament. Surgical excision is followed by a program of vocal rehabilitation.

Phonomicrosurgery III: pre- and postoperative care. Emerich, K. A., Spiegel, J. R., Sataloff, R. T. Wilbur James Gould Voice Center, Denver Center for the Performing Arts, Denver, Colorado, USA. *Otolaryngologic Clinics of North America* (2000) October, Vol. 33 (5), pp. 1071–80.

This article discusses the important aspects of pre- and post-operative care for phonomicrosurgical procedures. Making an accurate diagnosis is paramount to any surgical decision, which involves interdisciplinary evaluations by a laryngologist, voice pathologist, singing voice specialist, and other specialists. Patient selection and candidacy for phonomicrosurgery are discussed, including preoperative vocal rehabilitation, compliance, and pre- and postoperative timing issues. Postoperative voice rest issues are covered, and suggestions for postoperative voice rehabilitation are made. Risks of surgery and potential problems following phonomicrosurgery procedures are presented.

Evaluation of professional singers. Sataloff, R. T. Department of Otolaryngology – Head and Neck Surgery, Jefferson Medical College, Thomas Jefferson University, Philadelphia, PA, USA. *Otolaryngologic Clinics of North America* (2000) October, Vol. 33 (5), pp. 923–56.

Professional voice users present interesting challenges for laryngologists and speech-language pathologists. Many of these patients place olympic demands on their voices and must meet standards of near-perfection to succeed as vocal artists. Through systematic treatment combining the traditional art of medicine with modern technology, the physician should generally be able to care for the premier voice professional. The expertise gained improves the standard of care for all voice patients.

Audit of headache following resection of acoustic neuroma using three different techniques of suboccipital approach. Santarius, T., D'Sousa, A. R., Zeitoun, H. M., Cruickshank, G., Morgan, D. W.

Birmingham Heartlands Hospital, Department of Otolaryngology, UK. *Revue de Laryngologie – Otologie – Rhinologie* (2000), Vol. 121 (2), pp. 75–8.

A retrospective case notes review using pain visual analogue scale (VAS) and assessment of analgesia required by patients in the post-operative period at one, three, six, 12 and over 12 months following acoustic neuroma resection was performed. Glasgow Benefit Inventory (GBI) score was used to assess the change of quality of life and its relationship to pain following surgery. Questionnaires of 71 patients were included in the study, 23 of whom underwent wide craniotomy including dissection of upper cervical musculature (CE), 25 wide craniotomy with replacement of bone flap (CO) and 23 minimally invasive, approximately 2×2 cm, minicraniotomy (MCE). The minicraniotomy resulted in significantly diminished pain from third month post surgery as compared with wide craniotomy ($p<0.05$) and patients required less analgesia. Similarly, CO patients have experienced significantly less pain than CE patients ($p0.05$), but only after 12 months following surgery. Although consistently less in absolute visual analogue scores, there was no statistically significant difference between the amount of pain recorded by CO and MCE patients. There was no correlation between gender or age and the VAS pain score. The mean Glasgow Benefit Inventory score for all patients was –6.6, and there was no significant difference between operation types, genders or age. Although bone flap replacement appears to diminish the amount of post-operative pain, minimal invasive technique resulted in least pain following acoustic neuroma resection in our patients.

CT scanning in "second look" combined approach tympanoplasty. Blaney, S. P., Tierney, P., Oyarazabal, M., Bowdler, D. A. University Hospital, Lewisham, Department of Otolaryngology/Head and Neck Surgery, London, UK. *Revue de Laryngologie – Otologie – Rhinologie* (2000), Vol. 121 (2), pp. 79–81.

One of the main disadvantages of intact canal wall mastoid surgery for cholesteatoma is the necessity of the "second look". The morbidity of a second procedure can be reduced, however, with the aid of a rigid endoscope. Fifty-five consecutive patients undergoing a re-exploration were included in this study. Prior to surgery computerized tomography (CT) was performed in order to assess both the anatomy and degree of pneumatization of the middle ear cavity and mastoid bowl. The operative findings at the time of the "second look" were correlated with the pre-operative scans. An otoendoscopic approach was possible in all cases. In the diagnosis of residual or recurrent disease, the CT scan had a sensitivity of 43.8 per cent. The specificity of the CT scan was 51.3 per cent. The explanation for these findings is that it is impossible to differentiate between recurrence, scar tissue or inflammation on CT images in patients who have undergone previous mastoid surgery.

Does indermil glue improve success rates in myringoplasty? Interim analysis of a prospective trial. England, R. J., Roberts, A. C., Raines, C. H. Bradford Royal Infirmary, Department of Otolaryngology Head and Neck Surgery, West Yorkshire, UK. *Revue de Laryngologie – Otologie – Rhinologie* (2000), Vol. 121 (2), pp. 91–3.

The success rates of myringoplasty vary in the literature from 65 to 97.5 per cent. Various reasons for failure are cited, one being failure of the graft to act as an adequate scaffold due to its falling away from the edge of the perforation. The potential role of adhesives in myringoplasty has been described but not objectively assessed. A group of 15 patients with a perforation of the tympanic membrane present for at least six months was prospectively recruited. All patients underwent myringoplasty using underlayed temporalis fascia. In each case the graft was spot welded to the edge of the perforation using Indermil (n-butyl cyanoacrylate) glue. At mean 7.7 months post operatively 14 grafts are intact (93 per cent) and all patients have audiometric improvement ($p<0.01$). These results are better than those from national audit statistics in the UK using conventional methods suggesting this technique is very promising. The technique and results are described.