

Abstract Selection

The Journal is again pleased to thank the Editors, parent associations and publishers of the following journals for so kindly allowing a selection of their abstracts to be published in the past year. Without their kind permission and co-operation this service would not be possible—this is very gratefully acknowledged and appreciated. During the last 12 months, 422 abstracts were published out of a total of 1,450 which were reviewed (29%).

Acta Neurologica Scandinavica (Munksgaard International Publishers)
Acta Oncologica (Italian Society for the Prevention and Diagnosis of Tumors, and Italian Society for the Treatment of Tumors)
Acta Paediatrica Scandinavica
Advances in Neurology (Raven Press)
Allergy (Munksgaard International Publishers Limited)
American Dental Association Journal (American Dental Association)
American Geriatrics Society Journal
American Journal of Diseases of Children (American Medical Association)
American Journal of Gastroenterology (Official Journal of the American College of Gastroenterology) (Williams and Wilkins)
American Journal of Hematology (Alan R. Liss, Inc., Publishers)
American Journal of Human Genetics (University of Chicago Press)
American Journal of Industrial Medicine (Wiley-Liss, Publishers)
American Journal of Medical Genetics (Alan R. Liss Inc., Publishers)
American Journal of Medicine (Cahners Publishing Company)
American Journal of Neuro-Radiology (Williams and Wilkins)
American Journal of Orthodontics and Dento-Facial Orthopedics (The C. V. Mosby Co.)
American Journal of Physiology (The American Physiological Society)
American Journal of Roentgenology (Williams & Wilkins) (American Roentgen Ray Society)
American Journal of Surgery (Cahners Publishing Co. Inc. Medical-Health Care Group)
American Journal of Surgical Pathology (Arthur Purdy Stout Society of Surgical Pathologists) (Raven Press)
American Review of Respiratory Disorders (American Thoracic Society, Medical Section of the American Lung Association)
Anaesthesia (Journal of the Association of Anaesthetists of Great Britain and Ireland)
Anesthesia and Analgesia (International Anesthesia Research Society) (Elsevier Science Publishing Co. Inc.)
Anesthesiology (J.B. Lippincott Co.)
Annals of Allergy (American College of Allergists)
Annals of Emergency Medicine (American College of Emergency Physicians and the Society for Academic Emergency Medicine)
Annals of Neurology (Official Journal of the American Neurological Association and the Child Neurology Society) (Little, Brown & Company)
Annals of the New York Academy of Sciences
Annals of Pharmacotherapy (Harvey A. K. Whitney)
Annals of Plastic Surgery
Annals of Thoracic Surgery (Official Journal of the Society of Thoracic Surgeons and Southern Thoracic Surgical Association) (Elsevier Science Publishing)
Archives of Environmental Health (Heldref Publications)
Archives of Internal Medicine (American Medical Association)
Archives of Ophthalmology (American Medical Association)
Archives of Pathology and Laboratory Medicine (American Medical Association)
Archives of Surgery (American Medical Association)
Audiology (Journal of Auditory Communication—Official Organ of the International Society of Audiology)—S. Karger
Australasian Radiology (Royal Australasian College of Radiologists)
Aviation, Space and Environmental Medicine (Aerospace Medical Association)
Brain Research (Elsevier Science Publications)
British Journal of Cancer (Cancer Research Campaign)
British Journal of Disorders of Communication (College of Speech Therapists)

British Journal of Industrial Medicine (British Medical Association)
British Journal of Oral and Maxillofacial Surgery (Churchill Livingstone Medical Journals)
British Journal of Plastic Surgery (British Association of Plastic Surgeons) (Churchill Livingstone Medical Journals)
British Journal of Radiology (British Institute of Radiology)
British Journal of Surgery (Butterworth Scientific Limited)
Cancer (J.B. Lippincott Co.)
Cancer Treatment Reviews (Academic Press Inc. [London] Ltd.)
Chest (American College of Chest Physicians)
Cleft Palate Journal (American Cleft Palate Association)
Clinical and Experimental Allergy (Blackwell Scientific Publications Ltd.)
Clinical Genetics (Munksgaard International Publishers Ltd.)
Clinical Nephrology (Dustri-Verlag)
Clinical Neurology and Neurosurgery (Journal of the Netherlands Society of Neurology, The Netherlands Society of Neurosurgeons, and the Flemish Society of Neuro-Psychiatry)
Clinical Nuclear Medicine (J.B. Lippincott Co.)
Clinical Orthopaedics and Related Research (J.B. Lippincott & Co.)
Clinics in Plastic Surgery (W.B. Saunders Co.)
Clinical Radiology (Journal of the Royal College of Radiologists)
Clinical Science (The Medical Research Society & The Biochemical Society) (Portland Press)
Critical Care Medicine (Society of Critical Care Medicine) Williams and Wilkins
Current Opinion in Radiology (Current Science)
Dentomaxillofacial Radiology (International Association of Dento Maxillo Facial Radiology) (Butterworth Scientific)
Developmental Medicine & Child Neurology (Spastics Society) (MacKeith Press; Distributed by Blackwell Scientific Publications Ltd., Oxford)
Ding Intelligence and Clinical Pharmacology
Drug Research (Arzneimittel-Forschung)
Dysphagia (Springer-Verlag)
Ear and Hearing (American Auditory Society) (Williams and Wilkins)
Electroencephalography and Clinical Neurophysiology (Official Organ of the International Federation of Clinical Neurophysiology) (Elsevier Science Publishers)
European Journal of Surgical Oncology (European Society of Surgical Oncology and British Association of Surgical Oncology) (Academic Press Inc. [London] Ltd.)
Experimental Lung Research (Hemisphere Publishing Corporation)
Gastroenterology (American Gastroenterological Association) (W. B. Saunders & Co.)
Genomics (Academic Press Inc.)
Gut (Journal of the British Society of Gastroenterology) (British Medical Association)
Hearing Research (Elsevier Biomedical Press)
Human Genetics
Human Pathology (W. B. Saunders Co.)
Indian Journal of Leprosy (Quarterly Scientific Journal of the Hinde Kusht Nivaran Sangh (A Quarterly Scientific Journal))
Indian Journal of Medical Research (Monthly Journal of the Indian Council of Medical Research, New Delhi)
Indian Journal of Pathology and Microbiology (Indian Association of Pathologists and Microbiologists)
Infection (MMV Medizin Verlag)
Immunology (British Society for Immunology) (Blackwell Scientific Publications Ltd)
International Anesthesiology Clinics (Little Brown & Company)
International Journal of Clinical Pharmacology Research (Bioscience Ediprint Inc.)
International Journal of Pediatric Otorhinolaryngology (Elsevier Science Publishers)
International Journal of Radiation Oncology, Biology and Physics (Pergamon Press Limited)
Israel Journal of Medical Sciences (Israeli Medical Association)

- Japanese Journal of Clinical Oncology (Foundation of Clinical Oncology—National Cancer Centre)
- Journal of the Acoustical Society of America (American Institute of Physics)
- Journal of Allergy and Clinical Immunology (American Academy of Allergy and Immunology)—C. V. Mosby Co.
- Journal of the American Geriatric Society (Elsevier Science Publications)
- Journal of the American Medical Association (J.A.M.A.)
- Journal of Applied Physiology (American Physiology Society)
- Journal of the Autonomic Nervous System (Elsevier Science Publishers)
- Journal of Biomedical Engineering (Biology Engineering Society) (Butterworth Scientific Ltd)
- Journal of Bone & Joint Surgery—British Volume (British Editorial Society of Bone and Joint Surgery)
- Journal of Burns Care and Rehabilitation (The C. V. Mosby Co.)
- Journal of Clinical Microbiology (Society of General Microbiology)
- Journal of Clinical Neuro-Ophthalmology (Raven Press)
- Journal of Clinical Pathology Journal of the Association of Clinical Pathologists (British Medical Association)
- Journal of Comparative Physiology (Springer-Verlag)
- Journal of Cranio-Maxillo-Facial Surgery (European Association for Maxillo-Facial Surgery) (Georg Thieme Verlag)
- Journal of Dermatologic Surgery and Oncology—Journal Publishing Group
- Journal of Endocrinological Investigation (Italian Society of Endocrinology) (Editrice Kurtis)
- Journal of General Virology (Society for General Microbiology)
- Journal of Infectious Diseases (Infectious Diseases Society of America) (University of Chicago Press)
- Journal of International Medical Research (Cambridge Medical Publications Ltd)
- Journal of Medical Engineering and Technology (Taylor and Francis Ltd.)
- Journal of Medical Genetics (British Medical Association)
- Journal of Medical Virology (Alan R. Liss Inc)
- Journal of Neurological Sciences (Elsevier Science Publishers)
- Journal of Neurology, Neurosurgery and Psychiatry (British Medical Association)
- Journal of Neuroradiology (Société de Publication de Periodiques Internationaux et Français)
- Journal of Neurosurgery (American Association of Neurological Surgeons)
- Journal of Neurosurgical Sciences (Edizioni Minerva Medica)
- Journal of Occupational Medicine
- Journal of Oral & Maxillofacial Surgery (W.B. Saunders Co.)
- Journal of Pediatric Psychology (Society of Pediatric Psychology) (Plenum Publishing Corporation)
- Journal of Pediatrics (The C.V. Mosby Co.)
- Journal of Pharmacology and Therapeutics (American Society for Pharmacology and Experimental Therapeutics) (Williams & Wilkins)
- Journal of Prosthetic Dentistry (The C.V. Mosby Co.)
- Journal of Psychosomatic Research (Pergamon Journals)
- Journal of Radiology/Journale de Neuroradiologie (Société de Publication de Periodique Internationaux a Français)
- Journal of The Royal Navy Medical Service (Institute of Naval Medicine)
- Journal of Speech and Hearing Research (American Speech-Language-Hearing Association)
- Journal of Tropical Paediatrics
- Journal of Trauma (Williams & Wilkins)
- Journal of Tropical Medicine and Hygiene (Blackwell Scientific Publications Ltd.)
- Journal of Tropical Paediatrics
- Laboratory Investigation (United States & Canadian Academy of Pathology) (Williams & Wilkins)
- Life Sciences (Pergamon Press)
- Medical Journal of Australia (Journal of the Australian Medical Association)
- Neurologic Clinics of North America (W. B. Saunders Co.)
- Neurosurgery (Journal of the Congress of Neurological Surgeons) (Williams & Wilkins)
- New England Journal of Medicine (Massachusetts Medical Society)
- New York State Journal of Medicine (Medical Society of the State of New York)
- Ophthalmology (Journal of the American Academy of Ophthalmology)
- Oral Surgery, Oral Medicine, Oral Pathology (C.V. Mosby Co.)
- Pediatrics (American Academy of Pediatrics)
- Pediatric Emergency Care (Williams & Wilkins)
- Pediatric Infectious Diseases (Williams & Wilkins)
- Perceptual and Motor Skills
- Pharmatherapeutica (Clayton-Wrey Publications Ltd.)
- Physiologist (American Physiological Society)
- Postgraduate Medical Journal (Fellowship of Postgraduate Medicine)—Macmillan Press Ltd.
- Public Health Reports (Journal of the US Public Health Services)
- Radiographics (Radiological Society of North America)
- Radiology (Radiological Society of North America)
- Respiration Physiology
- Retina (Journal of Retinal and Vitreous Diseases)—J.B. Lippincott Co.
- Reviews of Infectious Diseases (Infectious Diseases Society of America)—University of Chicago Press
- Scandinavian Audiology (Scandinavian Audiological Society) (Almqvist and Wiksell International)
- Science (American Association for the Advancement of Science)
- South African Journal of Communicative Disorders (South African Speech-Language-Hearing Association)
- South African Medical Journal (Medical Association of South Africa)
- Southern Medical Journal (Southern Medical Association)
- Spine (J. B. Lippincott & Co)
- Thoracic & Cardiovascular Surgery (Georg Thieme, Verlag)
- Thorax
- Toxicology (Elsevier)
- Tropical Doctor (Royal Society of Medicine)
- Ultrastructural Pathology (Hemisphere Publishing Corporation)
- West Indian Medical Journal (University of the West Indies)

The following journals have been excluded as it is anticipated that subscribers/readers will already have access to them and will consult them regularly.

ACTA OTO-RHINOLARYNGOLOGICA BELGICA
 ACTA OTO-LARYNGOLOGICA (*Stockholm*)
 ADVANCES IN OTO-RHINO-LARYNGOLOGY
 AMERICAN JOURNAL OF OTOTOLOGY
 AMERICAN JOURNAL OF OTOLARYNGOLOGY
 ANNALES D'OTO-LARYNGOLOGIE
 ANNALS OF OTOTOLOGY, RHINOLOGY AND LARYNGOLOGY
 ARCHIVES OF OTOLARYNGOLOGY—HEAD AND NECK SURGERY
 ARCHIVES OF OTORHINOLOGARYNGOLOGY
 AURIS, NASUS, LARYNX
 BRITISH JOURNAL OF AUDIOLOGY
 CLINICAL OTOLARYNGOLOGY
 EAR, NOSE AND THROAT JOURNAL
 H.N.O.
 IL VALSALVA
 INDIAN JOURNAL OF OTOLARYNGOLOGY
 JOURNAL OF OTOLARYNGOLOGY
 LARYNGOLOGIE, RHINOLOGIE, OTOLOGIE
 LARYNGOSCOPE
 OTOLARYNGOLOGY—HEAD AND NECK SURGERY
 OTOLARYNGOLOGY CLINICS OF NORTH AMERICA
 ORL—JOURNAL OF OTO-RHINO-LARYNGOLOGY AND ITS RELATED SPECIALITIES
 PAKISTAN JOURNAL OF OTOLARYNGOLOGY
 REVUE DE LARYNGOLOGIE, OTOLOGIE ET RHINOLOGIE
 RHINOLOGY
 VESTNIK OTORINOLARYNGOLOGII

Development of early and late brainstem conduction time in normal and intrauterine growth retarded children. Jiang, Z. D., Wu, Y. Y., Zhen, M. S., Sun, D. K., Feng, L. Y., Peng, Y. M., Liu, X. Y. Department of Child Health, Children's Hospital, Shanghai Medical University, China. *Acta Paediatrica Scandinavica* (1991) May, Vol. 80 (5), pp. 494–9.

Development of early (I–III) and late (III–V) brainstem conduction time (BCT) in the brainstem auditory evoked responses was examined and compared in 178 appropriate-for-gestational-age (AGA) and 24 small-for-gestational-age (SGA) children from birth to six years of age. In AGA children, the III–V/I–III interval ratio increased with age from birth to two years and remained relatively steady. This indicates that the development of the early and late BCT, or probably the lower and upper brainstem is not synchronous during early childhood, with a slightly faster development of the early BCT relative to the late BCT. In SGA children, the I–V, I–III and III–V intervals showed similar developmental

trends to those in AGA children. However, the III-V/I-III ratio followed a developmental course which differed remarkably from that in AGA children. The ratio decreased slightly with age up to two years and was consistently smaller than in normal children after one year, indicating that the relative development of early and late BCT deviates from normal. This finding suggests that prenatal factors responsible for intrauterine growth retardation could alter the late or long-term development of the nervous system, resulting in sub-optimal outcome. Author.

Evaluation of auditory brain-stem response in full-term infants of cocaine-abusing mothers. Carzoli, R. P., Murphy, S. P., Hammer-Knisely, J., Houy, J. Department of Pediatrics, University of Florida Health Science Center, Jacksonville 32209. *American Journal of Diseases of Children* (1991) Sep. Vol. 145 (9), pp. 1013-6.

The purpose of this study was to examine the association between perinatal cocaine exposure and the prevalence of hearing deficit in the newborn. Auditory brain-stem response testing was performed on 50 infants of cocaine-abusing mothers and 50 control infants. All infants were born at full term. Cocaine-exposed infants had lower birthweights and a greater incidence of maternal tobacco and alcohol use. No differences were found in size, method of delivery, Apgar scores, or use of other illicit substances. Four infants of cocaine-abusing mothers and two control infants failed initial auditory brain-stem response testing. There were no differences in absolute or interpeak latencies of waveforms noted between the two groups. These data suggest that there is no increased incidence of hearing deficit as determined by auditory brain-stem response in newborns of cocaine-abusing mothers born at term and without other risk factors. Author.

Choroideremia and deafness with stapes fixation: a contiguous gene deletion syndrome in Xq21. Merry, D. E., Lesko, J. G., Sosnoski, D. M., Lewis, R. A., Lubinsky, M., Trask, B., van den Engh, G., Collins, F. S., Nussbaum, R. L. Department of Human Genetics, University of Pennsylvania School of Medicine, Philadelphia 19104. *American Journal of Human Genetics* (1989) Oct. Vol. 45 (4), pp. 530-40.

The study of contiguous gene deletion syndromes by using reverse genetic techniques provides a powerful tool for precisely defining the map location of the genes involved. We have made use of individuals with overlapping deletions producing choroideremia as part of a complex phenotype, to define the boundaries on the X chromosome for this gene, as well as for X-linked mixed deafness with perilymphatic gusher (DFN3). Two patients with deletions choroideremia are affected by an X-linked mixed conductive/sensorineural deafness; one patient, XL-62, was confirmed at surgery to have DFN3, while the other patient, XL-45, is suspected clinically to have the same disorder. A third choroideremia deletion patient, MBU, has normal hearing. Patient XL-62 has a cytogenetically detectable deletion that was measured to be 7.7 per cent of the X chromosome by dual laser flow cytometry; the other patient, XL-45, has a cytogenetically undetectable deletion that measures only 3.3 per cent of the X chromosome. We have produced a physical map of the X-chromosome region containing choroideremia and DFN3 by using routine Southern blotting, chromosome walking and jumping techniques, and long-range restriction mapping to generate and link anonymous DNA sequences in this region. DXS232 and DXS233 are located within 450 kb of each other on the same SfiI and MluI fragments and share partial SalI fragments of 750 and greater than 1,000 kb but are separated by at least one SalI site. In addition, DXS232, which lies outside the MBU deletion, detects the proximal breakpoint of this deletion. We have isolated two new anonymous DNA sequences by chromosome jumping from DXS233; one of these detects a new SfiI fragment distal to DXS233 in the direction of the choroideremia gene, while the other jump clone is proximal to DXS233 and detects a new polymorphism. These data refine the map around the loci for choroideremia and for mixed deafness with stapes fixation and will provide points from which to isolate candidate gene sequences for these disorders. Author.

Composition changes in human tracheal cartilage in growth and ageing, including changes in proteoglycan structure. Roberts, C. R., Pare, P. D. Pulmonary Research Laboratory, St. Paul's Hospital, University of British Columbia, Vancouver, Canada. *American Journal of Physiology* (1991) Aug. Vol. 261 (2 Pt 1), pp. L92-101. High-buoyant-density proteoglycans were extracted and purified from tracheal cartilage obtained from nine individuals aged one to

58 years. Cartilage from young individuals contained one major species of extractable aggregating proteoglycan and very little link protein. Link protein concentration relative to proteoglycan was observed to increase during the first 14 years of life, consistent with the increased formation of proteoglycan aggregates that are stabilized by link protein, as the process of tracheal cartilage growth and airway lumen widening ends. With increasing age after maturity, two further populations of proteoglycans became more abundant; these were characterized by higher mobility in composite agarose-polyacrylamide gel electrophoresis. The ability of the proteoglycans to associate with hyaluronan decreased with increasing age, although members of each of the three proteoglycan species contained functional hyaluronan-binding domains. Link proteins showed evidence of increasing proteolysis with age. Hydroxyproline content of the cartilage decreased with age; total tissue glycosaminoglycan and water contents showed no significant changes. Altered proteoglycan charge density, proteoglycan size, and aggregation properties, as well as changes in distribution of proteoglycans, may contribute to the changes in cartilage biomechanics that are associated with age-dependent changes in human lung function. Author.

Sodium transport and intracellular sodium activity in cultured human nasal epithelium. Willumsen, N. J., Boucher, R. C. Department of Medicine, School of Medicine, University of North Carolina, Chapel Hill 27514. *American Journal of Physiology* (1991) Aug. Vol. 261 (2 Pt 1), pp. C319-31.

Human airway epithelia are predominantly Na⁺-absorbing epithelia. To investigate the mechanisms for Na⁺ absorption across airway epithelia, the driving forces and paths for Na⁺ translocation across each membrane were examined with double-barrelled Na⁺-selective microelectrodes in cultured human nasal epithelium (HNE). Under control conditions, intracellular Na⁺ activity (acNa) was 23 ± 1 mM (n = 44 preparations, 393 impalements). Amiloride (10⁻⁴ M) hyperpolarized the apical membrane and increased the fractional apical membrane resistance but did not affect acNa. Exposure to Na⁺-free luminal solution induced bioelectric responses similar to amiloride but also reduced acNa to 8 ± 1 mM. Reduction of luminal Na⁺ concentration ((Na⁺) in the presence of amiloride also reduced acNa without further changes in bioelectric parameters. Reduction of serosal (Na⁺) decreased aNac, a response blocked by bumetanide (10⁻⁴ M). Ouabain (10⁻⁴ M, serosal) led to a reduction in equivalent short-circuit current (I_{eq}) and increase in acNa. We conclude that 1) acNa is higher in HNE than in most mammalian epithelial cells, 2) the apical membrane expresses a conductive Na⁺ path, and 3) the basolateral membrane transports Na⁺ via the Na⁺-K⁺-adenosinetriphosphatase and a Na⁺-K⁺-2Cl⁻ cotransport system. Author.

Regulation of the contractile element of airway smooth muscle. Gerthoffer, W. T. Department of Pharmacology, University of Nevada School of Medicine, Reno 89557. *American Journal of Physiology* (1991) Aug. Vol. 261 (2 Pt 1) pp. L15-28.

Smooth muscle of the mammalian airways controls airway diameter and resistance to airflow. Smooth muscle tone is in turn controlled by a variety of external signals that are transduced to useful work by contractile proteins. The protein components of the contractile element of airway smooth muscle are similar to those found in other smooth muscles and include actin, myosin, tropomyosin, caldesmon, and calponin. There has been significant recent progress in studies of contractile system regulation of airway smooth muscle. Regulation of myosin light chain kinase, identification of the sites phosphorylated on the regulatory myosin light chains, and the effect of myosin phosphorylation on stress development and crossbridge cycling rates have all been studied in some detail. We infer from these studies that besides myosin phosphorylation there is an important role for a thin filament Ca²⁺-dependent regulatory mechanism. The potentially important thin filament proteins caldesmon and calponin are present in tracheal smooth muscle and may be phosphorylated during contraction. The use of intracellular Ca²⁺ indicators to estimate changes in intracellular Ca²⁺ ((Ca²⁺)_i) and the development of several skinned fibre preparations have broadened the scope of physiological studies with airway smooth muscle and have suggested that the contractile element sensitivity to Ca²⁺ is not fixed but might be modulated by undefined messengers or excitation-contraction pathways. This adds an additional challenge to the continuing effort to define the messengers and regulatory proteins that couple activation of mem-

brane receptors to the contractile element in airway smooth muscle. Author.

Acute airway obstruction, hypertension and kyphoscoliosis. Wright, P. M., Alexander, J. P. Department of Clinical Anaesthesia, Belfast City Hospital, N. Ireland. *Anaesthesia* (1991) Feb, Vol. 46 (2), pp. 119–21.

An elderly woman developed acute respiratory obstruction after choking on a bolus of food. On rigid bronchoscopy no foreign body, or anatomical obstruction was seen, but airway obstruction recurred during emergence from general anaesthesia, and was thought to be functional in nature. A recurring airway obstruction followed, relieved by induction of anaesthesia and by sedation. This was subsequently demonstrated to be caused by a tortuous aorta which impinged intermittently on the anterior tracheal wall, as a result of kyphoscoliosis of the thoracic spine. We attribute the relief of airway obstruction by general anaesthesia to a reduction in arterial blood pressure. Author.

Team approach to total auricular reconstruction. Kesselring, U. K., de Goumoens, R. Centre de Chirurgie Plastique, Lausanne, Switzerland. *Annals of Plastic Surgery* (1991) Apr, Vol. 26 (4), pp. 299–305.

The surgery of microtia is a procedure that demands surgical and artistic skills, as well as precise planning of interventions. In cases where a functioning inner ear is present, functional and esthetic reconstruction is performed jointly with ear, nose, and throat surgeons. The middle ear plasty is performed through a transmastoid approach at the time of the second stage of the outer ear reconstruction. We demonstrate the special requirements of this team approach and also pay a tribute to Burt Brent, who has set the standards of modern ear reconstruction. Author.

Otoplasty without a conformer dressing. Krupps, S., Asse, N. Dri, H. Service de Chirurgie Plastique et Reconstructive, Lausanne, Switzerland. *Annals of Plastic Surgery*, (1991) Apr, Vol. 26 (4), pp. 407–12.

Since 1969, all our constructive, reconstructive, and aesthetic otoplasties have been managed without a conformer dressing. U-sutures, loosely tied over coated cotton rolls up until 1975, when thin and elastic silicone tubes began to be used, maintain the tissues in their new position. Experience and results of 193 ear operations are reported. Author.

Gore-Tex for augmentation of the nasal dorsum: a preliminary report. Waldman, S. R. *Annals of Plastic Surgery* (1991) Jun, Vol. 26 (6), pp. 520–5.

Many different materials have been used to provide augmentation of the nasal dorsum. This includes both autogenous and homogenous materials, as well as allografts. Many times autogenous material is not readily available and homogenous materials have recently demonstrated significant absorption. Several artificial materials have been used in the past, including Supramid, silicone, and Proplast, each with its own limitations or problems. Two years ago we began using Gore-Tex Soft Tissue Patch as a material to augment the nasal dorsum. Although our experience is preliminary, certainly, experience with this material in cardiac and abdominal surgery is extensive. Our initial impression is that this material is a very useful alternative to traditional methods of nasal augmentation. Author.

External septorhinoplasty in the cleft lip nose. Nishimura, Y., Kumoi, T. Department of Oto-Rhino-Laryngology, Hyogo College of Medicine, Nishinomiya, Japan. *Annals of Plastic Surgery*, (1991) Jun, Vol. 26 (6), pp. 526–40.

When the entire septum as well as the cartilaginous vault are exposed to direct vision by degloving the nasal covering, the complete extent of the deformities in cleft lip nose can be clarified. The septal cartilage is hollowed out leaving an L-shaped anterosuperior portion, whereas the intranasal structures are simultaneously altered to ensure the patency of the nasal airway. An adequate-sized piece is cut from the removed cartilage and is fitted to the anterior part of the remaining cartilage to enforce the columella, which acts as a strut to keep both lower lateral cartilages symmetrical and to create a nasal tip. Thus, a new cartilaginous pyramid with symmetrical nostrils is reconstructed. If the anterosuperior portion of the cartilage is deviated, the concave surface is scored to allow it to be straightened before the strut is fitted. Satisfactory cosmetic and functional results were obtained in most

patients with adult cleft lip nose, including those associated with deviation, without any major complications. Author.

Use and benefit of hearing aids in the tenth decade—and beyond. Parving, A., Philip, B. Department of Audiology, Bispebjerg Hospital, Copenhagen, Denmark. *Audiology* (1991) Vol. 30 (2), pp. 61–9.

The purpose of this study was to evaluate the use and benefit of hearing aids in 185 hearing-disabled subjects born before 1900, consecutively fitted with a hearing aid during the first six months of 1989. Information from 138 (75 per cent) subjects, 117 females and 21 males with a median age of 93 years (range 90–107), was obtained from a questionnaire, which was mailed four to six months after the fitting procedure. The questionnaire included questions concerning use of the hearing aid(s), self-reported benefit, handling problems, overall satisfaction/dissatisfaction, social and domiciliary situation and self-reported visual capacity. Among these elderly subjects 75 per cent had previously been provided with hearing aids, while 25 per cent were first-time users. The results demonstrate that 76 per cent use the hearing aid(s) at home and in small groups, and that 51 per cent use the hearing aid(s) each day; however, 35 per cent did not respond to this question. Sixty-four per cent expressed general satisfaction with their aid(s). Despite instruction and counselling, handling problems were frequently present. In those previously fitted with hearing aids a higher rate of time-related use and satisfaction was present and handling problems were less frequent than in the first-time applicants. It is concluded that elderly hearing-impaired subjects in the tenth decade use and benefit from hearing aids; however, more problems concerning use and benefit of hearing-aids are present in this age group than in the younger age groups. Author.

Structural modelling of functional neural pathways mapped with 2-deoxyglucose: effects of acoustic startle habituation on the auditory system. McIntosh, A. R., Gonzalez-Lima, F. Department of Anatomy, College of Medicine, Texas A&M University, College Station 77843. *Brain Research* (1991) May 3, Vol. 547 (2), pp. 295–302.

This paper describes the first application of structural modelling to neuroscience. Structural modelling (also known as path analysis) is a method to assess the relative impact of directional links in a system and how these interrelations may change under different conditions. The objective was to demonstrate how structural modelling can be used to determine the functional interrelationships between brain structures that form the auditory system. Using structural modelling, changes in auditory system 2-DG uptake were examined during long- and short-term habituation of the acoustic startle reflex. Models were based on anatomical connections between central auditory system structures. Using functional 2-DG data, the correlations between these structures were calculated and numerical weights were computed for each anatomical link. The analysis revealed that the lemniscal path was dominant during short-term habituation, while during long-term habituation this influence was modified through extra-lemniscal pathways. The models are discussed in the context of previous findings to demonstrate how structural modelling can not only complement, but also extract more information from 2-DG mapping experiments. Author.

Blood flow in jaw bones affected by chronic osteomyelitis. Wannfors, K., Gazelius, B. Department of Oral Pathology, School of Dentistry, Huddinge, Sweden. *British Journal of Maxillofacial Surgery* (1991) Jun, Vol. 29 (3), pp. 147–53.

In order to study circulatory changes throughout the course of chronic osteomyelitis of the jaws, blood flow in bone affected by osteomyelitis was assessed in 14 patients, by means of laser Doppler flowmetry (LDF). The difference in perfusion between the osteomyelitic bone and corresponding sites on the opposite healthy jaw was evaluated. The patients were classified into two groups according to the clinical activity of their disease. A significantly reduced bone blood flow was recorded in the jaw during non-active stages, while an increased flow was associated with the initial stage of disease and the inflammatory exacerbations. No pre-existing vascular disorders were discovered prior to the development of this disease. However, a long standing local inflammation of the jaw bone was associated with a persistent reduction in blood flow. In 12 healthy subjects, blood flow in the left jaw was found not to be statistically different to that in the right jaw. Author.

New surgical technique for reconstruction of the ala of the nose.

Orticochea, M. Plastic Surgery Service, Pontificia Universidad Javeriana, Bogota, Colombia. *British Journal of Plastic Surgery* (1991) Jul, Vol. 44 (5), pp. 359–62.

A technique is described for reconstructing through-and-through defects of the ala of the nose, using a compound flap from the nasal tip and the opposite ala. It is illustrated with two cases. Author.

Familial aggregation of nasopharyngeal carcinoma and other malignancies. A clinicopathologic description. Coffin, C. M., Rich, S. S., Dehner, L. P. Department of Laboratory Medicine and Pathology, University of Minnesota Hospital and Clinic, Minneapolis. *Cancer* (1991) Sep 15, Vol. 68 (6), pp. 1323–8.

Nasopharyngeal carcinoma (NPC) occurred in five members in three generations of a white American family of Scandinavian descent. Six other family members had malignancies including malignant melanoma, malignant lymphoma, squamous cell carcinoma of the tongue adenocarcinoma of the colon, and asynchronous bilateral in situ and invasive ductal carcinomas of the breast. There was also a history of autoimmune disorders and exposure to smoke, fumes, and chemicals in some family members. Regression analysis revealed a significant covariate risk for exposure to smoking, alcohol ingestion, dust, salted or spicy foods, and poorly ventilated conditions. According to segregation analysis, the susceptibility to nasopharyngeal carcinoma and other malignancies in this family was transmitted as an autosomal codominant characteristic. A specific histocompatibility antigen (HLA) haplotype of A1-B37-DR6 was associated with a predisposition for NPC, but no linkage was identified. Laboratory studies in selected family members did not reveal significantly elevated levels of Epstein-Barr virus antibodies or serum carcinoembryonic antigen. No specific karyotypic abnormalities were identified with peripheral blood chromosome analysis. This family was an example of apparent autosomal codominant susceptibility to NPC and other malignancies. The relationship of malignancy to the HLA haplotype of A1-B37-DR6, autoimmune disorders, and cytogenetic abnormalities was intriguing but not defined clearly. Author.

The radio-opacity of fishbones—species variation. Ell, S. R., Sprigg, A. Royal Hallamshire Hospital, Sheffield. *Clinical Radiology* (1991) Aug, Vol. 44 (2), pp. 104–7.

Plain radiographs are often taken to localize fishbones which lodge in the oropharynx and hypopharynx, but which are not seen on clinical examination. Fishbones which are thus revealed can then be removed by endoscopy. For a lateral neck radiograph to be useful in excluding a fishbone when mirror examination is difficult or fails to reveal a foreign body, it is important to know which types of fishbone are radio-opaque. We used a pig's neck preparation to simulate a human neck to determine the radio-opacity of the bones of 14 different species of fish eaten in the British Isles. We conclude that only the bones from cod, haddock, cole fish, gurnard, lemon sole, monk fish, grey mullet and red snapper are well seen by soft tissue radiographic techniques. Author.

Accuracy of CT in detecting squamous carcinoma metastases in cervical lymph nodes. Carvalho, P., Baldwin, D., Carter, R., Parsons, C. Department of Diagnostic Radiology, Royal Marsden Hospital, London. *Clinical Radiology* (1991) Aug, Vol. 44 (2), pp. 79–81.

The accuracy of computed tomography (CT) in the assessment of nodal metastases was correlated retrospectively with the pathological examination in 28 patients with known head and neck squamous cell carcinoma, who underwent neck dissections. Three patients had bilateral neck dissections resulting in a total of 31 dissections. CT scanning correctly staged 28 of 31 neck dissections providing an accuracy of 90 per cent, a sensitivity of 87.5 per cent and a specificity of 100 per cent in the detection of nodal metastases. Of the 21 true positives, underestimation of the extent of nodal disease occurred in seven cases. Regarding extracapsular nodal spread, CT resulted in an accuracy of 62 per cent, a sensitivity of 62.5 per cent and a specificity of 60 per cent. All three false negatives for nodal metastases occurred in metastatic spread to the submandibular nodes. The existing criteria for assessment of nodal metastases with CT are sensitive and specific, but in the assessment of extranodal spread CT may not detect 37.5 per cent of cases. Author.

Long-term postoperative dysphagia in oral/pharyngeal surgery patients: subjects' perceptions vs. videofluoroscopic observations. Baker, B. M., Fraser, A. M., Baker, C. D. Department of Surgery, University of Louisville, Kentucky. *Dysphagia* (1991), Vol. 6 (1), pp. 11–16.

Dysphagia commonly results from surgical resection of various structures within the oral, pharyngeal, and esophageal areas. The type and severity of swallowing dysfunction are based largely on the number and quantity of structures removed as well as the reconstructive procedure. Short term-recovery has been addressed in many studies. However, follow-up studies of long-term functional results and continuing swallowing problems following oral/pharyngeal surgery are unavailable. In this study, perception of swallowing dysfunction was compared with actual videofluoroscopic findings in subjects at least one year after oral/pharyngeal surgery. The comparative results of a questionnaire developed to evaluate patients' perception of continuing swallowing difficulty and an analysis of actual videofluoroscopic tapes indicated that the degree or type of dysphagia could not be determined from patients' subjective descriptions of the swallowing problem. Author.

Free muscle transfer with split thickness skin graft coverage in head and neck reconstructive surgery. Bos, K. E., Balm, A. J., Schouwenburg, P. F., Hilgers, F. J., de Boer, J. B. Department of Plastic and Reconstructive Surgery, Netherlands Cancer Institute (Antoni van Leeuwenhoek Huis, Amsterdam. *European Journal of Surgical Oncology* (1991) Aug, Vol. 17 (4), pp. 323–9.

Sixteen patients (eight females and eight males) who underwent microsurgical free tissue transfers for head and neck reconstruction are reviewed. In this series, the flap reconstruction was completed on eleven patients with extra-oral defects and five with intra-oral defects. Split thickness skin graft coverage was used in all cases. The rectus abdominis free muscle flap was used in nine patients and the latissimus dorsi free muscle flap in seven patients. The choice of tissue reconstruction was decided by the size of the surgical defect. There were no failures of the tissue transfers and skin grafts. In skilled hands, free tissue transfer provides a reliable method of head and neck reconstruction, with a low incidence of recipient and donor site complications. In extra-oral defects, coverage of free muscle transfer with split thickness skin grafts, results in a better colour match than musculocutaneous flaps, and complements the appearance and pliability of the free muscle flap. Author.

Nasopharyngeal carcinoma in Plateau State, Nigeria: a pathological study. Obafunwa, J. O., Bhatia, P. L. Department of Pathology, Jos University Teaching Hospital, Plateau State, Nigeria. *European Journal of Surgical Oncology* (1991) Aug, Vol. 17 (4), pp. 335–7.

Nasopharyngeal carcinoma is rare in Central Nigeria where it represents 1.7 per cent of all cancers. The prevalence rate is 4 per 100,000 and the male: female ratio is 2:1. Most tumours occur on the left side than the right (4:1) and the mean age at the time of presentation is 44.4 years. Undifferentiated and non-keratinizing carcinomas represent 60 per cent of cases, while well differentiated squamous cell carcinoma accounts for 40 per cent. Author.

Same location of the source of P1 of BAEPs and N1 of CAP in guinea pig. Maurice, J. C., Paquereau, J., Marillaud, A. Laboratoire de Physiologie Generale, U.A. 290 CNRS Faculte de Medecine, Poitiers, France. *Hearing Research* (1991) Jun, Vol. 53 (2), pp. 209–16.

The purpose of this study was to point out the location of N1 and N2 of the compound action potential (CAP) and the first waves of the brainstem auditory evoked potentials (BAEPs) by the mean of the section of the VIIIth nerve at the porus acousticus in guinea pigs. Our results agree with most of the studies in the literature. In the absence of lesion of the internal auditory artery, the section of the cochlear nerve induced the persistence, alone, of the P1 of BAEPs in which latency was similar to initial P1 before section, and the subsequent waves disappeared. Simultaneously, a monophasic negative potential (N1) of the auditory nerve remained without N2. When the section included the internal auditory artery all BAEPs and CAP components disappeared simultaneously and very suddenly just after the section. These results definitively excluded a proximal contribution of the cochlear nerve in the N1 of CAP and P1 of BAEPs. The N2 of CAP and P2 of BAEPs are not generated, even in part, in the intracochlear or intrapetrous portion of the cochlear nerve. Author.

Human T-cell responses to ragweed allergens: Amb V homologues. Huang, S. K., Marsh, D. G., Johns Hopkins Asthma and Allergy Center, Johns Hopkins University School of Medicine, Baltimore 21224. *Immunology* (1991) Jul, Vol. 73 (3), pp. 363–5.

Specific IgE and IgG responses to highly purified Ambrosia (rag-

weed) allergens, Amb a V, Amb t V and Amb p V from the artemisiifolia (short), trifida (giant) and psilostachya (western) species are strongly associated with HLA-DR2 and Dw2 (DR2.2) in allergic Caucasoid individuals. To investigate the molecular basis of these HLA associations, we examined the human T-cell responses to these Amb V homologues using three Amb a V-specific, DR alpha beta I 2.2-restricted T-cell clones from an atopic patient. We first examined the cross-reactivity of Amb a V-specific T-cell clones upon challenge with the Amb a V homologues, Amb t V and Amb p V, in the presence of autologous antigen-presenting cells (APC). Neither Amb t V nor Amb p V was able to stimulate the T-cell clones directly. However, both Amb t V and Amb p V specifically blocked, in a dose-dependent fashion, the ability of APC to present Amb a V to all three T-cell clones. Taken together, these results suggest that Amb t V and Amb p V possess distinct T-cell epitopes, but that all Amb V homologues share similar or identical regions (agretopes) interacting with the DR alpha beta I 2.2 (DR alpha beta I 1501) heterodimer. The agretope was potentially localized to a 14-residue C-terminal Amb a V peptide (with Ala-Cys substitutions), which was able to block presentation of native Amb a V by the APC to the T-cell clones. Author.

Influence of noise spectra on auditory frequencies and degree of temporary threshold shift. Chaturvedi, R. C., Rai, R. M., Sharma, R. K. Defence Institute of Physiology and Allied Sciences, Delhi Cantt. *Indian Journal of Medical Research* (1991) Apr, Vol. 94, pp. 107-14.

Influence of noise spectra on auditory frequencies of 131 audiometrically normal human volunteers was assessed. Each subject was exposed to four different types of noise on different days for a period of 30 min. Noises utilized in this study were broadband noise (100 dBA), broadband noise (BBN) mixed independently with tones of 0.5, 1.2 and 4 kHz at three intensity levels (85, 95 and 105 dBA) and noises of different bandwidths (100 dBA) around the above tones as centre frequencies. BBN produced maximum TTS2 at 4 kHz (21.42 ± 0.61 to 26.15 ± 1.00 dB), while concentration of sound energy around these tones, affected hearing at one-half octave above the point of concentration of sound energy. TTS2 produced by 4 kHz tonal component of 95 and 105 dBA and 2 kHz of 105 dBA were significantly higher than the one produced by BBN at 4 kHz. The single tones of 2 and 4 kHz and noise of one-third octave bandwidth (cf 4 kHz) produced TTS2s which were significantly higher as compared to that of BBN at 4 kHz. At the same centre frequency, noise concentrated in thinner bands was more injurious than that in the thicker bands. Lower frequencies of hearing appears to be more resistant to noise as for the same sound pressure level the TTS2 observed in low frequencies was less as compared to higher frequencies. Author.

Central auditory toxicity of sisomicin in guinea-pigs. Khaliq, T., Hasan, S. A., Hasan, M. Department of Otorhinolaryngology, J. N. Medical College, Aligarh Muslim University. *Indian Journal of Medical Research* (1991) Apr, Vol. 94, pp. 156-60.

The central auditory toxicity of sisomicin was studied in guinea-pigs administered sisomicin (135 mg/kg body weight) sc for ten days. Total lipids, phospholipids and cholesterol were estimated in the pons, inferior colliculus, medial geniculate body and auditory cortex. While the total lipids were increased in a non-preferential manner in all the regions studied, phospholipids and cholesterol levels registered no change. This study suggests the possible central auditory toxicity following sisomicin administration. Author.

Acyclovir in the treatment of laryngeal papillomatosis. Lopez-Aguado, D., Perez-Pinero, B., Betancor, L., Mendez, A., Campos-Banales, E. Department of Otolaryngology, University Hospital of Canary Islands, Tenerife, Spain. *International Journal of Pediatric Otorhinolaryngology* (1991) May, Vol. 21 (3), pp. 269-74.

We report the results obtained in a study of three young patients with laryngeal papillomatosis, who were treated with acyclovir after tumour excision using forceps was performed under microlaryngoscopy. No recurrence of the papillomatosis occurred between 18 and 42 months post-therapy. Laryngeal papillomatosis is the most common proliferative laryngeal lesion in children. Different non-surgical therapies have been used to prevent its recurrence but with poor results. Acyclovir is a drug with proved efficacy in DNA viral diseases. Since papillomata of the larynx is most likely a viral disease which is imputed to have a DNA virus etiology, acyclovir may be effective to control it. Author.

Branchial anomaly in a newborn presenting as stridor. Morrish, T. N., Manning, S. C. Department of Otorhinolaryngology, University of Texas Southwestern Medical Center, Dallas 75235-9035. *International Journal of Pediatric Otorhinolaryngology* (1991) May, Vol. 21 (3), pp. 259-62.

A male patient presented at day 3 of life with a small anterior neck mass and mild intermittent upper airway obstruction. Despite intravenous antibiotics, the patient rapidly progressed to impending airway obstruction requiring surgical intervention. The clinical, radiographic, and histologic findings of this extremely rare case of a third branchial anomaly will be presented. The embryologic basis for the connection to the aerodigestive tract and the access provided to gram negative enteric organisms in newborns will be discussed. Author.

Granular cell tumours of the head and neck in children: the experience at the Children's Hospital of Philadelphia. Torsiglieri, A. J. Jr., Handler, S. D., Uri, A. K., Division of Otolaryngology, Children's Hospital of Philadelphia, University of Pennsylvania School of Medicine 19104. *International Journal of Pediatric Otorhinolaryngology* (1991) May, Vol. 21 (3), pp. 249-58.

Granular cell tumours are rare, usually benign tumours of controversial histogenesis. These tumours are uncommon in children. Granular cell tumours in adults have a predilection for the head and neck, but this was not noted in our experience with children. Of the 22 granular cell tumours diagnosed and managed at the Children's Hospital of Philadelphia from 1960 and 1988, seven were from the head and neck. One child with a subglottic granular cell tumour is of particular interest and is presented in detail. Author.

Surgery for congenital stapes ankylosis with an associated congenital ossicular chain anomaly. Teunissen, B., Cremers, C. W. Institute of Otorhinolaryngology, University Hospital of Nijmegen, The Netherlands. *International Journal of Pediatric Otorhinolaryngology* (1991) May, Vol. 21 (3), pp. 217-26.

The surgical findings and results are presented on 32 ears with congenital stapes ankylosis with an associated congenital anomaly of the ossicular chain. One-third of the patients had a syndromal diagnosis. In 26 ears, stapedectomy could be performed. In two other ears, stapes ankylosis to the bony facial canal was mobilized successfully. In the four remaining ears, surgical intervention had to be limited to an exploratory tympanotomy for various reasons. The average hearing gain was 23 dB for the 28 ears on which stapes surgery had been performed. A substantial hearing gain of at least 15 dB was achieved in 19 of these 28 ears (68 per cent). The end result was limited to a small extent by an average preoperative sensorineural component of 16 dB in the hearing loss. A review of the findings and results from other larger series in the literature are presented. Author.

Radial versus circumferential incision in myringotomy and tube placement Guttenplan, M. D., Tom, L. W., DeVito, M. A., Handler, S. D., Wetmore, R. F., Potic, W. P. Division of Otolaryngology, Children's Hospital of Philadelphia, PA 19104. *International Journal of Pediatric Otorhinolaryngology* (1991) May, Vol. 21 (3), pp. 211-15.

Pressure equalization tubes are a well-recognized treatment for persistent otitis media with effusion and recurrent acute otitis media. Ideally, the tube should remain in place until the Eustachian tube function returns. Efforts to improve the functional life expectancy of tubes have concentrated on tube design with little attention directed at modification of the surgical technique. Some authors have noted that a radial incision offers theoretical advantages over a circumferential incision. A randomized study comparing radial and circumferential incisions in myringotomy with tube placement was conducted. Two hundred and twenty-eight patients had a circumferential incision performed in one ear and a radial incision in the opposite ear. On follow-up examinations the tube position and time to extrusion were noted. Using the sign test, there was no statistical difference in extrusion rates between the two groups. This study does not support the theoretical advantages espoused in the literature. Author.

Sensori-neural hearing loss in patients treated with irradiation for nasopharyngeal carcinoma. Grau, C., Moller, K., Overgaard, M., Overgaard, J., Elbrond, O. Department of Oto-rhino-laryngology and Audiology, University of Aarhus, Denmark. *International Journal of Radiation, Oncology, Biology and Physics* (1991) Aug, Vol. 21 (3) pp. 723-8.

The present investigation has been carried out to evaluate the sensitivity of the inner ear to irradiation. Cochlear function was tested in a cohort of 22 patients before and 7 to 84 months after receiving external irradiation for nasopharyngeal carcinoma. The pre-irradiation sensori-neural hearing threshold at 500, 1000, 2000, and 4000 Hz was used as a baseline for the individual patient, and the observed sensori-neural hearing loss (SNHL) was calculated as the difference between pre- and post-irradiation values. The pre-irradiation hearing level or patient age was not correlated with the actual SNHL. In contrast, there was a significant correlation between the total radiation dose to the inner ear and the observed hearing impairment. SNHL was most pronounced in the high frequencies, with values up to 35 dB (4000 Hz) and 25 dB (2000 Hz) in some patients. The latent period for the complication appeared to be 12 months or more. The deleterious effect of irradiation on the hearing should be kept in mind both in treatment planning and in the follow-up after radiotherapy. Author.

Second neoplasms in patients with carcinomas of the vocal cord: incidence and implications for survival. Roberts, T. J., Epstein, B., Lee, D. J. Division of Radiation Oncology, Johns Hopkins Hospital, Baltimore, MD 21205.

International Journal of Radiation, Oncology, Biology and Physics (1991) Aug, Vol. 21 (3), pp. 583–9.

A retrospective analysis was performed for 218 patients who were managed for carcinomas of the glottic larynx from 1975 to 1988. With a median follow-up of 51 months (range: 24 to 120 months), 41 patients developed a second malignant neoplasm. Six patients had synchronous and 35 had metachronous second malignant neoplasms. The median interval between the diagnosis of glottic carcinoma and a second malignant neoplasm was 31 months. This median interval increased to 43 months when only the metachronous tumours were analysed. The average annual risk of developing a second malignant neoplasm (SMN) in a 10-year period was 3.1 per cent. Seventy-one per cent of them occurred in the upper aerodigestive tract or lungs. When analyzed according to the initial stage of the glottic carcinoma, 23 of 145 (16 per cent) patients with T1 or T2 glottic carcinomas developed a second malignant neoplasm, whereas 18 of 73 (25 per cent) patients T3 or T4 lesions did so. For the T1/T2 group, the average annual risk was 2.5 per cent, as compared to 4.8 per cent for the T3/T4 group ($p = 0.023$). The development of a second malignant neoplasm adversely affected survival. The 10-year actuarial survival for these patients who did not develop a second malignant neoplasm was 45 per cent, as compared to 19 per cent for those who did develop a second malignant neoplasm ($p = 0.008$). Although second malignant neoplasms occurred in only 19 per cent of the total patient population, their impact on the survival rate of the overall population was equal to that of glottic carcinomas. The median survival after the diagnosis of a SMN was six months. The high incidence of second malignant neoplasms in patients with glottic carcinomas warrants careful follow-up and clinical investigation of the use of chemopreventive agents. Author.

Accelerated superfractionated irradiation for advanced carcinoma of the head and neck: concomitant boost technique. Schmidt-Ullrich, R. K., Johnson, C. R., Wazer, D. E., Masko, G., Chasin, W. D., Karmody, C. S. Department of Radiation, Oncology, Medical College of Virginia, Richmond 23298–0058. *International Journal of Radiation, Oncology, Biology and Physics* (1991) Aug, Vol. 21 (3), pp. 563–8.

Between 1980 and 1988, 94 patients with AJCC Stage III and IV squamous cell carcinoma of all sites of the upper aero-digestive tract were treated with radiotherapy. We report here on 62 patients who are followed for a minimum of two years. Of these, 30 patients were treated with conventional once-a-day radiotherapy and 32 patients were irradiated using an accelerated superfractionation regimen during part of the treatment course. The altered fractionation schedule employed a concomitant boost technique with clinically demonstrable disease being irradiated twice-a-day during the first or second half of the treatment course. Daily radiation fractions were 1.8 Gy and the boost field was treated with 1.6 Gy after a 4- to 6-hr interval. No significant differences in acute treatment toxicity were observed in the two treatment groups. Patients treated with conventional and accelerated fractionation regimens experienced 36 months actuarial local tumour control rates of 40 per cent and 67 per cent ($p = 0.03$), respectively, which translated into an actuarial disease-free survival of 40 per cent and 64 per cent ($p = 0.04$). The increased locoregional control rates in patients

treated with accelerated fractionation were associated with an adjusted and overall survival advantage at the $p = 0.05$ level. We conclude that our regimen of accelerated superfractionated irradiation with shortening of the treatment course resulted in improved control and survival rates at conventional doses of 68.4 to 73.8 Gy. Author.

The effect of local-regional control on distant metastatic dissemination in carcinoma of the head and neck: results of an analysis from the RTOG head and neck database. Leibel, S. A., Scott, C. B., Mohiuddin, M., Marcial, V. A., Coia, L. R., Davis, L. W., Fuks, Z. Department of Radiation Oncology, New York, New York 10021. *International Journal of Radiation, Oncology, Biology and Physics* (1991) Aug, Vol. 21 (3), pp. 549–56.

A retrospective analysis of the effect of local control on the development of distant metastases was performed in 2648 patients with carcinoma of the head and neck selected from the RTOG database. The 5-year time-adjusted incidence of distant metastases was 21 per cent for patients who were in local-regional control at six months after the start of treatment, compared to 38 per cent for local-regional failure patients (p less than 0.001). The incidence of distant metastases detected between the interval of six months to 2.5 years after treatment was significantly increased in patients with tumours of the oral cavity, oropharynx, supraglottic larynx, and glottis who developed local-regional failure within this time period, compared to those who remained locally controlled (19 per cent distant metastases for local-regional failure vs 7 per cent for local-regional control (p less than 0.001)). In contrast, there was no difference in the incidence of distant metastases in patients with carcinoma of the nasopharynx or hypopharynx regardless of the local-regional disease status. A Cox proportional hazards regression analysis demonstrated that local-regional control was the most significant variable affecting the development of distant metastases, followed by tumour site, N-stage, and T-stage. For all tumour sites, except for the hypopharynx and nasopharynx, improvements in local-regional control are likely to improve survival. Tumours of the hypopharynx and nasopharynx have a higher probability of micro-metastatic dissemination at the time of initial diagnosis, and until effective methods to treat disseminated disease are developed, the effect of local control on survival will not be readily discerned. Author.

Modelling the interactions between noise exposure and other variables. Humes, L. E., Jesteadt, W. Department of Speech and Hearing Sciences, Indiana University, Bloomington 47405. *Journal of the Acoustical Society of America* (1991) Jul, Vol. 90 (1), pp. 182–8.

The interaction of noise exposure with other variables is reviewed. For the case of the interaction of noise with other variables that produce behavioural threshold shifts, the application of a newly developed model is described and demonstrated. This model, referred to as the modified power-law model, provides an accurate prediction of the combined effects of two threshold-elevating factors. The model accounts for the interaction of post-exposure a pre-existing pre-existing permanent loss or a pre-existing temporary loss. The model's application is demonstrated for multiple exposures to steady-state noise in which each exposure lasts as short as 12 min or as long as 6 h. Finally, implications of the model's application to the interaction of noise with other ototraumatic agents are reviewed. Author.

Effects of peak pressure and energy of impulses. Patterson, J. H. Jr. U.S. Army Aeromedical Research Laboratory, Sensory Research Division, Fort Rucker, Alabama 36362–5292. *Journal of the Acoustical Society of America* (1991) Jul, Vol. 90 (1), pp. 205–8.

Peak pressure has been one of the key parameters of impulse noise used to assess the hazard to hearing. It is used in most international noise exposure limits. France uses an A-weighted energy limit. There is a rough correspondence between peak pressure and the hazard to hearing for a given type of impulse noise. However, when the effects of different types of impulses are compared, this correspondence breaks down. One of the alternate measures of impulse intensity is weighted energy. Weighted energy is appealing for a number of reasons. It does not depend on details of the pressure-time history such as the peak pressure and the more common duration measures. It should be easier to integrate with continuous or intermittent noise standards. It would make it easier to use standard hearing protector attenuation to estimate the hazard when a specific hearing protector is worn. Results of previously published

articles and reports will be discussed. These reports lead to the conclusion that weighted energy is a more potent determiner of hearing hazard than peak pressure if spectral effects are controlled. Author.

The structural and functional consequences of acoustic injury in the cochlea and peripheral auditory system: a five-year update. Saunders, J. C., Cohen, Y. E., Szymko, Y. M. Department of Otorhinolaryngology and Human Communication, University of Pennsylvania, Philadelphia 19104. *Journal of the Acoustical Society of America* (1991) Jul, Vol. 90 (1), pp. 136–46.

This presentation considers important developments and new trends related to acoustic injury in the peripheral auditory system reported during the past five years. The discussion begins with the effect overstimulation has on the “active” cochlear process, and the associated loss in receptive field (tuning curve) selectivity. Exposure to intense sound also changes the structure and function of the tectorial membrane, sensory hair bundles, tip links, and intracellular organelles. All of these injuries may change the way in which energy is delivered to the transduction channels of the hair cell. Important new evidence describing the quantitative relation between hair cell loss and permanent hearing loss is reviewed, and the possibility that specific exposure conditions cause unique lesions to the inner or outer hair cells is explored. Finally, the importance of hair cell regeneration in the chick cochlea, changes in the CNS following acoustic injury, and the cochlear vascular system are considered. Author.

Human temporary threshold shift (TTS) and damage risk. Melnick, W. Department of Otolaryngology, Ohio State University, Columbus 43210. *Journal of the Acoustical Society of America* (1991) Jul, Vol. 90 (1), pp. 147–54.

Information regarding the relation of human temporary threshold shift (TTS) to properties of steady-state and intermittent noise published since the 1966 appearance of the CHABA damage risk contours is reviewed. The review focuses on results from four investigative areas relevant to potential revision of the CHABA contours including effects of long-duration exposure and asymptomatic threshold shifts (ATS); equivalent quiet and/or safe noise levels; effects of intermittency; and use of noise-induced temporary threshold shift (NITTS) to predict susceptibility to noise-induced permanent threshold shift (NIPTS). These data indicate that two of three major postulates on which the original contours were based are not valid. First, recovery from TTS is not independent of the conditions that produced the TTS as was assumed. Second, the assumption that all exposures that produce equal TTS2 are equally hazardous is not substantiated. The third postulate was that NIPTS produced by 10 years of daily exposure is approximately equal to the TTS2 produced by the same noise after an 8-h exposure. Based upon several TTS experiments showing that TTS reaches an asymptote after about 8 h of exposure, the third CHABA postulate can be reworded to state the hypothesis that ATS produced by sound of fixed level and spectrum represents an upper bound on PTS produced by that sound regardless of the exposure duration or the number of times exposed. This hypothesis has a strong, logical foundation if ATS represents a true asymptote for TTS, not a temporary plateau, and if threshold shifts do not increase after the noise exposure ceases. Author.

Noise exposure from leisure activities: a review. Clark, W. W. Central Institute for the Deaf, St Louis, Missouri 63110. *Journal of the Acoustical Society of America* (1991) Jul, Vol. 90 (1), pp. 175–81. Over the past two decades there has been increasing concern about the role of non-occupational, or leisure noise on hearing. This paper reviews published studies that detail the noise levels and potential effects of some noisy leisure activities. Considered are the most common sources of leisure noise: exposure to live or amplified rock, classical, or jazz music; exposures from personal listening devices (“walkman” type); noise around the home, and hunting and target shooting. Although all activities listed above have the potential for dangerous levels of noise exposure, the most serious threat to hearing comes from recreational hunting or target shooting. Author.

Insights into hazard from intense impulses from a mathematical model of the ear. Price, G. R., Kalb, J. T. U.S. Army Human Engineering Laboratory, Aberdeen Proving Ground, Maryland 21005–5001. *Journal of Acoustical Society of America* (1991) Jul, Vol. 90 (1), pp. 219–27.

In order to provide insight into the mechanisms that operate in the ear when it is exposed to intense sounds, time and frequency domain mathematical models of the ear including significant nonlinearities in the middle ear were developed to trace energy flow from the free field to the inner ear and ultimately allow the calculation of basilar membrane displacement and a consequent hazard function. These models match the ear’s behaviour at low intensities and also reproduce many of the features of the data on hearing hazard from intense impulses. They provide critical insights into the loss mechanisms, suggest new strategies for protecting hearing as well as reducing hazard at the source and could also serve as a framework for a new, accurate, theoretically based method for rating hazard from intense sounds. Author.

Thyroarytenoid muscle activity during loaded and non-loaded breathing in adult humans. Insalaco, G., Kuna, S. T., Costanza, B. M., Catania, G., Cibella, F., Bellia, V. Istituto di Fisiopatologia Respiratoria del Consiglio Nazionale delle Ricerche, Palermo, Italy. *Journal of Applied Physiology* (1991) Jun, Vol. 70 (6), pp. 2410–6.

Previous fibre-optic studies in humans have demonstrated narrowing of the glottic aperture in expiration during application of expiratory resistive loads. Nine healthy subjects were studied to determine the effect of expiratory resistive loads on the electromyographic activity of the thyroarytenoid (TA) muscle, a vocal cord adductor. Four of the nine subjects also underwent the application of inspiratory resistive loads and voluntary prolongation of either inspiratory (TI) or expiratory (TE) time. TA activity was recorded by intramuscular hooked-wire electrodes. During quiet breathing in all subjects, the TA was phasically active on expiration and often tonically active throughout the respiratory cycle. TA expiratory activity progressively increased with increasing levels of expiratory load. Inspiratory loads resulted in increased TA “inspiratory” activity. Voluntary prolongation of TE to times similar to those reached during loaded breathing induced increases in TA expiratory activity similar to those reached during the loaded state. Voluntary prolongation of TI was associated with an increase in TA inspiratory activity. Similar increases in TI during inspiratory loading or voluntary conditions were associated with comparable increases in TA inspiratory activity in three of the four subjects. In conclusion, increased activation of TA during the application of expiratory resistive loads implies that the reported narrowing of glottic aperture during expiratory loading is an active phenomenon. Changes in activation of the TA with resistive loads appear to be related to changes in respiratory pattern. Author.

Maxillectomy in childhood. Tresserra, L., Collares, M. V., Regas, J. S., Garcia-Vaquero, J. A. Department of Cranio-Maxillo-Facial Surgery, Maternity and Infants Hospital, Vall d’Hebron, Autonomous University of Barcelona, Spain. *Journal of Cranio-Maxillo-Facial Surgery* (1991) May, Vol. 19 (4), pp. 155–60.

A maxillectomy in the upper part of the maxilla is an uncommon operation in childhood. The authors comment on the clinical evolution, the related pathologies and the surgical techniques employed in the treatment of eight patients. Author.

Wildervanck or cervico-oculo-acoustic syndrome and MRI findings. Hughes, P. J., Davies, P. T., Roche, S. W., Matthews, T. D., Lane, R. J. Regional Neurosciences Centre, Charing Cross Hospital, London, UK. *Journal of Neurology, Neurosurgery and Psychiatry* (1991) Jun, Vol. 54 (6), pp. 503–4.

In 1952, Wildervanck described the first case of what he styled the cervico-oculo-acoustic (COA) syndrome. This comprises Klippel Feil’s (KF) anomaly (congenitally fused cervical vertebrae), congenital sensorineural deafness, and Duane’s retraction syndrome (deficient abduction with retraction on adduction). Since that original paper, there have been further reports describing this triad, either completely or incompletely. A further case of this syndrome is reported and the first report of MRI head scan findings in this condition is presented. In addition, the origin of mirror movements observed as part of the KF syndrome are discussed. Author.

Retrospective long-term follow-up analysis in 21 patients with chordomas of various sites treated at a single institution. Keisch, M. E., Garcia, D. M., Shibuya, R. B. Radiation Oncology Center, Mallinckrodt Institute of Radiology, St Louis, Missouri. *Journal of Neurosurgery* (1991) Sep, Vol. 75 (3), pp. 374–7.

Twenty-one patients with chordoma were treated at the Radiation Oncology Center, Mallinckrodt Institute of Radiology, between

1949 and 1986. Thirteen patients had sacrococcygeal tumours, five had clival tumours, two had nasopharyngeal tumours, and one had a lumbar spine tumour. Nine patients were treated with surgery alone, eight patients with subtotal resection and postoperative irradiation, and four patients with radiotherapy alone after biopsy. The 5- and 10-year actuarial survival rates were 74 per cent and 46 per cent, respectively. The 10-year actuarial survival rate was significantly better in patients treated with surgery alone or surgery and irradiation than in those treated with radiotherapy alone (52, 32 and 0 per cent, respectively, $p = 0.02$). Although all patients ultimately suffered a recurrence, those with lumbosacral tumours treated with surgery and irradiation had a longer mean disease-free survival period (6.6 years) than those treated with surgery alone (4.1 years) ($p = 0.08$). Disease-free survival times of patients with base of the skull tumours was not significantly different between the treatment groups. Irradiation after resection of chordomas appears to increase the time to first relapse in lumbosacral tumours and should be considered after subtotal resection. Author.

Geniculate neuralgia: the surgical management of primary otalgia. Rupa, V., Saunders, R. L., Weider, D. J. Section of Neurosurgery, Dartmouth-Hitchcock Medical Centre, Hanover, New Hampshire. *Journal of Neurosurgery* (1991) Oct, Vol. 75 (4), pp. 505–11. Intractable, unexplained deep-ear pain presents a rare, albeit significant problem in otolaryngological and neurosurgical practice. The authors review their experience with 18 cases of primary otalgia during the past 15 years. A total of 31 surgical procedures were performed. Seventeen patients had sequential rhizotomies and one patient had microvascular decompression alone. Based on the clinical diagnosis, the nerves sectioned were singly or in combination: the nervus intermedius (14 patients), geniculate ganglion (10 patients), IXth nerve (14 patients), Xth nerve (11 patients), tympanic nerve (four patients), and chorda tympani nerve (one patient). Microvascular decompression of the involved nerves was undertaken in nine patients, in whom vascular loops were discovered. Adhesions (six patients), thickened arachnoid (three patients), and benign osteoma (one patient) were other intraoperative abnormalities noted. The overall success of these procedures in providing pain relief was 72.2 per cent and the mean follow-up period was 3.3 years (range one month to 14.5 years). There was no surgical mortality. Expected site effects were: decreased lacrimation, salivation, and taste related to nervus intermedius nerve section, and transient hoarseness and diminished gag related to IXth and Xth nerve section. Four patients developed sequelae consisting of sensorineural hearing loss, vertigo and transient facial nerve paresis. One patient had a cerebrospinal fluid leak and another developed aseptic meningitis as postoperative complications. Except when primary glossopharyngeal neuralgia is the working diagnosis, a combined posterior cranial fossa-middle cranial fossa approach is recommended for adequate exploration and/or section of the Vth, IXth and Xth cranial nerves as well as the geniculate ganglion and nervus intermedius. Author.

Conservative treatment of patients with acoustic tumours. Bederson, J. B., von Ammon, K., Wichmann, W. W., Yasargil, M. G. Department of Neurosurgery, University Hospital of Zurich, Switzerland. *Neurosurgery* (1991) May, Vol. 28 (5), pp. 646–50; discussion 650–1.

Seventy of 178 patients with acoustic tumours initially were treated conservatively and have been followed up for an average of 26 ± 2 months. The tumour size was determined by the mean maximum anteroposterior and mediolateral diameters, using computed tomographic or magnetic resonance imaging scans obtained sequentially throughout the follow-up period. The average tumour growth was 1.6 ± 0.4 mm the first year, and 1.9 ± 1.0 mm the second year (range, -2 to 17 mm/y): four tumours showed apparent regression, 28 (40 per cent) had no detectable growth and 37 (53 per cent) exhibited growth (average, 3.8 ± 1.2 mm/y). Within individual patients, the tumour growth rate determined during the first year of follow-up was predictive of tumour growth rate determined during the following year. Rapid tumour growth or clinical deterioration in nine of the 70 patients (13 per cent) who initially were treated conservatively necessitated subsequent surgery an average of 14 ± 5 months after the patient was initially seen. This group had a larger initial tumour size (27.0 ± 3.4 mm vs. 21.3 ± 0.9 mm, P less than 0.05), and a faster one-year growth rate (7.9 ± 2.3 mm/y vs. 1.3 ± 0.3 mm/y, P less than 0.05) than the 61 patients who did not require surgery. Two patients, however, experienced neurological deterioration that required surgery, even though there was

no tumour growth. The high incidence of acoustic tumours with no detectable growth or apparent spontaneous regression must be taken into account when evaluating the indications for surgery and the efficacy of radiotherapy. (Abstract truncated at 250 words). Author.

Telecanthal approach for meningiomas in the ethmoid and sphenoid sinuses. Fujitsu, K., Saijoh, M., Aoki, F., Sakata, K., Fujii, S., Mochimatsu, Y., Kuwabara, T. Department of Neurosurgery, Yokohama City University School of Medicine, Japan. *Neurosurgery* (1991) May, Vol. 28 (5), pp. 714–9; discussion 719–20.

In three cases involving meningiomas in the ethmoid and sphenoid sinuses, transbasal spreading of the interocular distance (telecanthal approach) was used for tumour removal and reconstruction of the skull base. This telecanthal approach involves 1) bilateral en bloc removal of the superior lateral rim of the orbit, the nasal bone, and the posterior lateral wall of the orbit; 2) detachment of the medial canthal ligaments; and 3) spreading of the interocular distance. This approach provides a wide working space beneath the anterior half of the midline skull base, and needs neither a facial incision nor significant retraction of the brain. The surgical technique and its modification are described. The discussion focuses not only on comparisons with other techniques, but on the indications for this approach. Meningiomas originating in the paranasal sinuses are rare: a brief review of the literature concerning the clinicopathological features and pathogenesis is also given. Author.

Deafness after bilateral midbrain contusion: a correlation of magnetic resonance imaging with auditory brain stem evoked responses. Jani, N. N., Laureno, R., Mark, A. S., Brewer, C. C. Department of Neurology, Washington Hospital Centre, Washington, District of Columbia. *Neurosurgery* (1991) Jul, Vol. 29 (1), pp. 106–8; discussion 108–9.

A 46-year-old woman became deaf after a closed head injury. When a computed tomographic scan failed to disclose the cause, conversion disorder was suspected. Magnetic resonance imaging, however, showed bilateral contusions of the inferior colliculi, providing objective evidence for an organic cause of hearing loss. Auditory brain stem evoked responses and stapedial reflexes also provided objective evidence of brain stem injury. This case illustrates the phenomenon of dorsal midbrain injury after head trauma. It indicates the sensitivity of magnetic resonance imaging for small focal lesions after head trauma, and it demonstrates some difficulties in the diagnosis of "hysterical" deafness. Author.

Acoustic schwannomas in children. Allcutt, D. A., Hoffman, H. J., Isla, A., Becker, L. E., Humphreys, R. P. Division of Neurosurgery, Hospital for Sick Children, Toronto, Ontario, Canada. *Neurosurgery* (1991) Jul, Vol. 29 (1), pp. 14–18.

The clinical presentation and treatment of three cases of acoustic schwannoma occurring in children are described. All the tumours were detected late, when they had attained a large size and were extremely vascular. The use of preoperative tumour embolization as an adjunct to surgical excision is discussed. Author.

Intracanalicular acoustic neurinomas. Samii, M., Matthies, C., Tatagiba, M. Hannover Medical School, Nordstadt Hospital, Germany. *Neurosurgery* (1991) Aug, Vol. 29 (2), pp. 189–98; discussion 198–9.

The cases of 16 patients with acoustic neurinomas confined to the intracanalicular area are presented. These represent 2.7 per cent of the 600 patients with acoustic neurinomas consecutively operated upon at the Neurosurgical Clinic at Nordstadt hospital during the last eight years. The comparatively earlier onset of vestibular symptoms and signs was characteristic of this group and precipitated diagnosis. The diagnostic reliability of magnetic resonance imaging was at least equivalent to that of air computed tomographic cisternography. Complete tumour removal was accomplished via the suboccipital approach in all patients, with 100 per cent preservation of facial nerve and facial function; the cochlear nerve was preserved anatomically in 100 per cent of the patients and functionally in 57 per cent. No recurrence has occurred during follow-up periods of up to eight years in all 16 patients. A broad spectrum of the current literature is considered, and purely intracanalicular acoustic neurinomas are discussed with regard to clinical characteristics, diagnostic steps-including neuroradiological and neurophysiological approaches and surgical treatment and results. Author.

Acute otitis media in human immunodeficiency virus-infected chil-

dren. Principi, N., Marchisio, P., Tornaghi, R., Onorato, J., Massironi, E., Picco, P. Department of Pediatrics (IV), University of Milan Medical School, Italy. *Pediatrics* (1991) Sep. Vol. 88 (3), pp. 566–71.

To evaluate the occurrence and outcome of acute otitis media (AOM) in human immunodeficiency virus (HIV)-infected children, a prospective comparative cohort study was performed. Twenty-seven HIV-infected children were individually matched with paired control subjects and followed up for 543 months (mean 19.4 ± 11). Data collected were evaluated considering HIV-infected children both as a whole and as P1 and P2 patients according to Centres for Disease Control classification. During the observation period, 46 episodes of AOM were diagnosed in 15 HIV patients and 22 in 16 control children; 11 P1 had 27 AOM episodes vs 17 in 13 control children; 6 P2 had 19 AOM episodes vs 5 in 4 control children. Human immunodeficiency virus infection does not seem to modify the occurrence of AOM. Recurrent AOM (three or more episodes in six months) was, however, significantly more common in P2 children. Amoxicillin, to which the bacteria isolated in P2 children were sensitive *in vitro*, cured 33 of 46 episodes in HIV-infected children compared with 20 of 22 in control children. Cure rate was similar in P1 children compared with control children but was significantly lower in P2 versus control children (47.3 per cent vs 100 per cent). Reasons for higher occurrence of failures in P2 children remain to be investigated. Author.

Resolution of otitis media with effusion with the use of a stepped treatment regimen of trimethoprim-sulfamethoxazole and prednisone. Daly, K., Giebink, G. S., Batalden, P. B., Anderson, R. S., Le, C. T., Lindgren, B. University of Minnesota Otitis Media Research Centre, Minneapolis 55440. *Pediatric Infectious Diseases Journal* (1991) Jul. Vol. 10 (7), pp. 500–6.

This double-blind, placebo-controlled trial was designed to determine whether intervention with a stepped regimen of trimethoprim-sulfamethoxazole (TMP-SMX) and prednisone would prevent high risk children from developing chronic otitis media with effusion (OME) and recurrent acute otitis media. Forty-two children were enrolled, assigned to treatment with active drug or placebo and then examined at two-week intervals. They received TMP-SMX (or placebo) during the first two weeks, TMP-SMX and prednisone (or placebo) during weeks three and four for persistent OME and TMP-SMX (or placebo) for weeks five and six if OME was still unresolved. After treatment 48 per cent of active drug and 14 per cent of placebo subjects resolved OME bilaterally (P less than 0.05). Active drug subjects also had fewer acute otitis media episodes than placebo subjects while receiving study treatment (P less than 0.01). Although this treatment regimen produced short term OME resolution, long term benefits were not demonstrated. Author.

Simulated aggressive skull base erosion in response to benign sinonasal disease. Som, P. M., Lawson, W., Lidov, M. W. Department of Radiology, Mount Sinai Medical School, City University of New York, New York. *Radiology* (1991) Sep. Vol. 180 (3), pp. 755–9. Benign sinonasal masses and slow-growing neoplasms tend to remodel the nasal vault and facial bones, and this is particularly true of nasal polyps and inverted papillomas. However, when such benign masses press against the floor of the anterior cranial fossa and the walls of the sphenoid sinuses, simulated aggressive bone destruction rather than bone remodelling usually occurs. This type of bone destruction implies to the radiologist that a carcinoma may also be present, and this information could dissuade a surgeon from operating with an attempt at cure. In fact, about 90 per cent of the time with inverted papillomas and in virtually all cases of nasal polyposis, no carcinoma is present. The computed tomographic (CT) scans and magnetic resonance images of 14 patients are used to demonstrate these changes. In addition, the CT scans of three patients with malignancies are shown to illustrate the similarity in the bony skull base changes. Author.

Hemangioma of the nasal vault: MR and CT features. Dillon, W. P.,

Som, P. M., Rošenau, W. Department of Radiology, University of California, San Francisco 94143–0628. *Radiology* (1991) Sep. Vol. 180 (3), pp. 761–5.

Six patients with a history of epistaxis (five patients) or nasal obstruction (one patient) were found to have a capillary hemangioma of the nasal vault that involved one or more nasal turbinates. Four patients underwent computed tomographic (CT) examination; two of these also underwent magnetic resonance (MR) imaging. Four others underwent only MR imaging. At CT and MR, all of the lesions were well circumscribed and intensely enhancing, with contralateral deviation of the nasal septum. Remodelling of the surrounding bone was present in three patients. On T1-weighted MR images, the masses were intermediate in signal intensity. Varying degrees of T2 shortening were shown on T2-weighted MR images, with an appearance that suggested the presence of blood products surrounding an inner matrix of higher-signal-intensity tumour. Intense enhancement at CT and MR assisted differentiation of tumour from retained sinonasal secretions. In two patients, external carotid arteriography revealed small foci of pooling contrast material; in one of these patients, arteriovenous shunting was also present. Pathologic examination in all patients demonstrated capillary hemangiomas with varying degrees of fibrosis and hemosiderin deposition. Author.

Idiopathic intractable epistaxis: endovascular therapy. Vitek, J. Department of Radiology, University of Alabama, Birmingham 35233. *Radiology* (1991) Oct. Vol. 181(1), pp. 113–6.

Thirty patients with intractable idiopathic epistaxis were treated with endovascular therapy. Embolization of the internal maxillary artery controlled the epistaxis in 87 per cent of the patients, and the success rate was increased to 97 per cent after supplemental embolization of the facial artery. The only complication observed was transient postembolization hemiparesis, which occurred in one of the 30 patients. Intractable idiopathic epistaxis is defined as epistaxis of unknown cause that is refractory to nasal packing. Such epistaxis is commonly treated with surgical intervention, including ligation of the terminal segments of the internal maxillary artery and the ethmoid arteries. An alternative approach is performance of endovascular therapy. In our opinion, embolization is a safe and effective procedure when it is carried out by appropriately trained personnel. In most patients, its performance requires use of only neuroleptanalgesia; surgery can be avoided, and the duration of hospitalization is significantly shortened. We recommend that embolization be adopted as the primary modality for the treatment of idiopathic intractable epistaxis. Author.

Bronchoscopic removal of foreign bodies in children: retrospective analysis of 822 cases. Pacsaoglu, I., Dogan, R., Demircin, M., Hatipoglu, A., Bozer, A. Y. Department of Thoracic and Cardiovascular Surgery, Hacettepe University, Faculty of Medicine, Ankara, Turkey. *Thoracic and Cardiovascular Surgery* (1991) Apr. Vol. 39 (2), pp. 95–8.

At the Department of Thoracic and Cardiovascular Surgery of Hacettepe University, a total number of 822 pediatric bronchoscopies were performed from 1984 through 1990 for suspected foreign body aspiration. Of the children 65.3 per cent were boys and 34.7 per cent were girls ranging in age from one month to 14 years. Definitive statement of foreign-body aspiration was obtained from 394 patients. Unilateral hyperaeration, atelectasis, and unilateral parenchymal infiltration were the most common radiological findings. In all endoscopic procedures, a pediatric rigid bronchoscope was used under general anesthesia and controlled ventilation. Foreign bodies were found in 77.7 per cent of the 822 patients. In the rest of the children inflammatory disorders were confirmed. The foreign bodies most commonly found in 639 patients were sunflower seeds (21.1 per cent), beans (10.4 per cent), water-melon seeds (10 per cent), and hazelnuts (9.8 per cent). In our presented series, the incidence of non-fatal complication was 1.8 per cent, apart from these patients five of them (0.6 per cent) died after the bronchoscopic procedures. Author.