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Abstract Selection

Follicular dentritic cell tumours of the oral cavity. Chan, J. K., Tsang, W. Y., Ng, C. S., Tang, S. K., Yu, H. C., Lee, A. W. Department of Pathology, Queen Elizabeth Hospital, Kowloon, Hong Kong. *American Journal of Surgical Pathology* (1994) February, Vol. 18 (2), pp. 248–57.
Follicular dendritic cell tumours are uncommon, and all the reported cases have occurred as primary lymph node tumours. We report two cases in the oral cavity, one in the soft palate and one in the tonsil. The tumours were characterized by sheets, whorls, and storiform arrays of spindly and syncytial-appearing cells with oval nuclei, fine chromatin, distinct nucleoli, and occasional nuclear pseudoinclusions. Multinucleated forms were present and were prominent in one case. An unusual feature was the presence of irregular pseudovascular spaces, which could raise a concern for vascular neoplasm. Because the tumours showed cohesive growth and a sharp interface with the fibrous stroma, they could also be mistaken for carcinoma, sarcoma, or melanoma. After radiation therapy, the palatal tumour showed a greater degree of nuclear pleomorphism, numerous nuclear pseudoinclusions, and striking nuclear grooving and foldings, mimicking interdigitating reticulum cell tumours. The diagnosis in both cases was confirmed by immunoreactivity with CD21 and CD35 and by ultrastructural demonstration of interdigitating cell processes with desmosomes. Both tumours also showed unexpected immunoreactivity with muscle-specific actin. Follicular dendritic cell tumour merits wider recognition of its possible extranodal occurrence as well as its full morphological spectrum in order to better define its behaviour. Author.

End-tidal sevoflurane concentration for tracheal intubation and minimum alveolar concentration in pediatric patients. Inomata, S., Watanabe, S., Taguchi, M., Okada, M. Department of Anesthesia, Mito Saiseikai General Hospital, Ibaraki, Japan. *Anesthesiology* (1994) January, Vol. 80 (1), pp. 93–6.
BACKGROUND: Sevoflurane is a new inhalational anesthetic agent having low solubility in blood and a relatively nonpungent odour. As such it should be useful as an inhalation induction in pediatric patients. The objectives of the study were to determine both the minimum alveolar concentration (MAC) and the concentration required for tracheal intubation (MACE I) of sevoflurane in paediatric patients. METHODS: The study group consisted of 36 ASA physical status 1 elective surgical patients, aged 1–9 years. MACE I determination: After establishing and maintaining the end-tidal concentration for 15 min, tracheal intubation was attempted with an uncuffed tracheal tube without neuromuscular relaxants or other adjuvants. Each concentration at which tracheal intubation was attempted was predetermined according to the up-and-down method (with 0.5 per cent as a step size). MAC determination: The patients examined were the same as those for MACE I determination except that for the exclusion of those to whom neuromuscular relaxants or other adjuvants drugs were administered. End-tidal sevoflurane concentration was determined according to the up-and-down method (with 0.5 per cent as a step size) and held constant for at least 15 min before a skin incision. RESULT: MACE I of sevoflurane was 2.69 per cent (95 per cent fiducial limits: 2.23 per cent and 3.37 per cent); MAC of sevoflurane was 2.03 per cent (95 per cent fiducial limits: 1.51 per cent and 2.53 per cent); and the MACE I/MAC ratio was 1.33. CONCLUSION: Sevoflurane appears to be suitable for use in paediatric patients as an induction agent, permitting tracheal intubation without neuromuscular relaxants. Author.

Lymphocyte subsets and antigen-specific IgE antibody in nasal polyps. Liu, C. M., Shun, C. T., Hsu, M. M. Department of Otorhinolaryngology, College of Medicine, National Taiwan University, Taipei. *Annals of Allergy* (1994) January, Vol. 72 (1), pp. 19–24.
We tried to elucidate the role of allergic factors in the pathogenesis of nasal polyps. Nasal polyps were obtained from 22 patients with chronic sinusitis which included eight patients proved to have nasal allergy by history, skin test, and serum-specific IgE against house dust mite. Immunohistochemical studies of lymphocyte subpopulations in the mucosa of nasal polyps were performed with monoclonal antibodies, and the concentrations of antigen-specific IgE in nasal polyps were measured by the fluoroallergosorbent test. In the epithelium, few HLA-DR+ cells were constantly present. In the submucosa, pan T cell marker CD2 was detected more often than CD19 (B cell), and more CD8 (T suppressor/cytotoxic) cells than CD4 (T helper/inducer) cells were found. IgE-producing plasma cells were rarely present. The lymphocyte subpopulations and the levels of antigen-specific IgE in nasal polyps were not different between the allergic and nonallergic groups. This suggests that allergy may not be the cause, and cellular immunity of antigen presenting cells and T lymphocytes, which consecutively induce infiltration and degranulation of mast cells by the production of cytokines, may be involved in the formation of nasal polyps with sinusitis. Author.

Pseudocyst of the auricle: case reports and its biochemical characteristics. Ichioka, S., Yamada, A., Ueda, K., Harii, K. Division of Plastic Surgery, Tomei-Atsugi Hospital, Kanagawa, Japan. *Annals of Plastic Surgery* (1993) November, Vol. 31 (5), pp. 471–4.
Pseudocyst of the auricle is a rare, asymptomatic cystic swelling of the auricle resulting from accumulation of yellow viscous fluid with unknown cause. We herein report three such patients in whom biochemical study of the aspirated fluid revealed markedly elevated activity of lactate dehydrogenase (LDH) and a preponderance of LDH-4 and LDH-5. We postulate that pseudocyst formation is due to the disruption of the auricular cartilage and that LDH in the fluid is released from the auricular cartilage. This observation supports that the lesions represent a pattern of chrondromalacia. It is hypothesized that the cause of such pseudocysts is repeated minor trauma. Author.

Cisplatin, 5-fluorouracil and interferon alpha 2b for recurrent or metastatic head and neck cancer. Cascinu, S., Fedeli, A., Luzi-Fedeli, S., Catalano, G. Servizio di Oncologia, Ospedali Riuniti, Pesaro, Italy. *British Journal of Cancer* (1994) February, Vol. 69 (2), pp. 392–3.
On the basis of preclinical data suggesting the possibility of maximizing the efficacy of 5-fluorouracil and cisplatin by interferon, a pilot clinical trial was initiated in recurrent and/or metastatic head and neck cancer. Thirty-four patients were treated with cisplatin at 100 mg m^{-2}, followed by 5-fluorouracil at 1,000 mg by continuous infusion for five days. Interferon alpha 2b was administered at the dose of three million U i.m. daily for seven days, beginning the day before chemotherapy. Courses were repeated every three weeks. Two patients achieved a complete remission, six a partial response, 14 had stable disease and 12 progressed on therapy, for an overall response rate of 23 per cent (95 per cent confidence interval 10–36 per cent). Median survival time was five months. Toxicity was severe. Stomatitis, diarrhoea and myelosuppression were the most common side-effects. Because of the poor response rate and the presence of severe toxicity, in our opinion further clinical trials in head and neck cancer should be attempted only after a better definition in preclinical studies of interactions among 5-fluorouracil, cisplatin and interferon. Author.

Physical examination and selective conservative management in patients with penetrating injuries of the neck. Demetriades, D., Charalambides, D., Lakhoo, M. Department of Surgery, Baragwanath Hospital, Johannesburg, South Africa. *British Journal of Surgery* (1993) December, Vol. 80 (12), pp. 1534–6.
This prospective study of 335 patients with penetrating injuries of the neck examined the decision whether to operate or observe according to a protocol based mainly on physical examination. Emergency angiography was performed in only three patients.

Sixty-six patients (20 per cent) were subjected to emergency operation because of signs and symptoms suggested of significant injury (60 patients) or because of positive investigations (six). The remaining 269 patients (80 per cent) were selected for non-operative management. Two of these patients (0.7 per cent) required elective operation during the initial hospital stay. No deaths occurred in patients treated conservatively. Some 192 (72 per cent) of observed patients were available for early follow-up and 111 (42 per cent) for late follow-up. No significant complications were found. Physical examination is a reliable method for detecting significant injuries following penetrating neck trauma. Emergency angiography is rarely necessary. Author.

A phase II study of outpatient chemotherapy with cisplatin, 5-fluorouracil, and leucovorin in nasopharyngeal carcinoma. Chi, K. H., Chan, W. K., Cooper, D. L., Yen, S. H., Lin, C. Z., Chen, K. Y. Cancer Therapy Center, Veterans General Hospital-Taipei, Taiwan. *Cancer* (1994) January 15, Vol. 73 (2), pp. 247–52.
BACKGROUND. Systemic disease progression occurs in the majority of patients with locally advanced nasopharyngeal carcinoma (NPC). Although a variety of chemotherapeutic drugs have had tumoricidal activity, the roles of chemotherapy and optimal regimens must be further defined. Based on high response rates of Cisplatin, 5-Fluorouracil and Leucovorin (PFL) in patients with advanced squamous cell cancers of the head and neck, we tested a new outpatient PFL chemotherapy program in patients with advanced NPC. METHODS. Patients with NPC and 1) previously untreated, locally advanced disease; 2) local regional recurrence (LR) after radiotherapy; or 3) metastatic disease were eligible for study. Cisplatin 20 mg/m^2/d, 5-FU 800 mg/m^2/d and Leucovorin 90 mg/m^2/d were administered simultaneously by continuous 96-hour intravenous infusion every three weeks. Patients were evaluated for response, survival, and toxicity. RESULTS. Thirty-five patients were studied. The response rates of PFL therapy were 100 per cent (15 per cent complete response (CR), 85 per cent partial response (PR)) in 20 patients with locally advanced or locally recurrent disease, and 80 per cent (13.3 per cent CR, 67.7 per cent PR) in 15 patients with metastatic disease. The overall median survival was 20 months after therapy (range, 2–21). The median survival rate for previously untreated, locally advanced patients was not reached. The median survival rate for previously treated, local recurrence was 34 months and for metastatc patients was 14 months. Mucositis and leukopenia were the dose-limiting toxicities (20–23 per cent, grade III) and occurred more frequently in patients previously irradiated. No treatment-related deaths occurred. CONCLUSIONS. Outpatient PFL chemotherapy is active, safe, and convenient for advanced stage nasopharyngeal carcinoma patients, and the overall toxicities are tolerable. Author.

Case report: magnetic resonance demonstration of haemorrhagic acoustic neuroma. Brady, A. P., Stack, J. P. Institute of Radiological Sciences, Mater Hospital, Dublin 7, Ireland. *Clinical Radiology* (1994) January, Vol. 49 (1), pp. 61–3.
A 70-year-old patient with a history suggestive of acoustic neuroma developed sudden neurological symptoms. CT showed an enhancing mass in the left cerebello-pontine angle thought to be a meningioma. Magnetic resonance (MR) with gadolinium enhancement demonstrated appearances consistent with a haemorrhagic acoustic neuroma, a diagnosis confirmed at surgery. The literature regarding haemorrhagic intracerebral tumours and MR appearances of acoustic neuroma is reviewed. Author.

The role of peroral fine needle aspiration cytology (FNAC) in the diagnosis of parapharyngeal lesions—a study of 51 cases. Mondal, A., Gupta, S. Department of Cytopathology, S.V.S. Marwari and Cancer Detection Centre, Raja Rammohan Sarani, Calcutta. *Indian Journal of Pathology and Microbiology* (1993) July, Vol. 36 (3), pp. 253–9.
The utility of peroral fine needle aspiration cytology (FNAC) in diagnosis of 51 parapharyngeal lesions was studied from January, 1986 till May, 1991. The age of the patients ranged from six years to 85 years. Analysis of results showed nine inflammatory lesions, 22 benign tumours and 20 malignant tumours. Correlation with histopathology showed diagnostic accuracy of 90.2 per cent with no false positive report. Review of FNAC of head and neck lesions showed hardly any publication on aspiration cytology of parapharyngeal masses. Author.

Radiation therapy as an alternative to surgery in the management of intracranial juvenile nasopharyngeal angiofibroma. Wiatrak, B. J., Koopmann, C. F., Turrisi, A. T. Department of Otolaryngology—Head and Neck Surgery, University of Michigan Medical Centre Ann, Arbor. *International Journal of Pediatric Otorhinolaryngology* (1993) December, Vol. 28 (1), pp. 51–61.
Juvenile nasopharyngeal angiofibroma is a benign, vascular tumour which typically presents in adolescent males. Although surgical resection is usually recommended for the management of this tumour, external beam radiation therapy has also been advocated in the literature. We report three cases of large juvenile nasopharyngeal angiofibromas with extensive intracranial extension primarily managed with external beam radiation therapy. Although there was not complete resolution of the tumours, there was significant alleviation of symptomatology with no serious side effects from the radiation therapy. Based on these cases, we feel that external beam radiation therapy in the management of extensive juvenile nasopharyngeal angiofibromas with intracranial extension is warranted in certain select cases. Author.

Posterior glottic stenosis in children. Irving, R. M., Bailey, C. M., Evans, J. N. Department of Paediatric Otolaryngology, Hospital for Sick Children, London, UK. *International Journal of Pediatric Otorhinolaryngology* (1993) December, Vol. 28 (1), pp. 11–23.
The management of posterior glottic stenosis resulting from impaired crico-arytenoid joint (CAJ) mobility in infants and children presents a perplexing and frequently unrewarding surgical dilemma; any improvement in the airway is almost invariably at the expense of the voice. Progress in this area has been hampered not only by the rarity of cases, but also by the technical difficulty of achieving an accurate diagnosis at endoscopy. In order to address this problem we have undertaken a retrospective analysis of 35 infants and children, treated at Great Ormond Street between 1980 and 1991, with endoscopically confirmed impairment of CAJ mobility. Five cases of mild posterior glottic stenosis were successfully treated either conservatively or by laser scar division. Thirty cases of moderate or severe stenosis were identified, and 19 of these have undergone corrective surgery. Of these 19, 17 had a prior tracheostomy, and 12 have been decannulated. No problems with aspiration were encountered but five (i.e. 25 per cent) of those treated surgically suffered a deterioration of voice quality. Author.

Correlations between flow resistance and geometry in a model of the human nose. Schreck, S., Sullivan, K. J., Ho, C. M., Chang, H. K. Department of Biomedical Engineering, University of Southern California, Los Angeles 90089–1451. *Journal of Applied Physiology* (1993) October, Vol. 75 (4), pp. 1767–75.
The relationship between the pressure losses within the nasal airways and nasal geometry were studied in a 3:1 scale model. The geometry of the model was based on magnetic resonance images of the skull of a healthy male subject. Pressure measurements, flow visualization, and hot-wire anemometry studies were performed at flow rates that, in vivo, corresponded to flows of between 0.05 and 1.50 l/s. The influenec of nasal congestion and the collapse of the external nares were examined by using modelling clay to simulate local constrictions in the cross section. A dimensionless analysis of the pressure losses within three sections of the airway revealed the influence of various anatomic dimensions on nasal resistance. The region of the exterior nose behaves as a contraction-expansion nozzle in which the pressure losses are a function of the smallest cross-sectional area. Losses in the interior nose resemble those associated with channel flow. The nasopharynx is modelled as a sharp bend in a circular duct. Good correspondence was found between the predicted and actual pressure losses in the model under conditions that stimulated local obstructions and congestion. Author.

Effect of hypercapnia and hypoxia on arytenoideus muscle activity in normal adult humans. Kuna, S. T., Insalaco, G., Villeponteaux, D. R., Vanoye, C. R., Smickley, J. S. Department of Internal Medicine, University of Texas Medical Branch, Galveston 77555-0561. *Journal of Applied Physiology* (1993) October, Vol. 75 (4), pp. 1781–9.
The electrical activity of the arytenoideus muscle, a vocal cord adductor, was measured in 14 normal adult humans during progressive isocapnic hypoxia and progressive hyperoxic hypercapnia. Electromyograms of the arytenoideus were obtained with intramuscular hooked-wire electrodes implanted by means of a fibre-optic nasopharyngoscope. Correct placement of the electrodes was confirmed by discharge patterns during voluntary maneuvres. In three of the subjects, respiratory-related arytenoideus activity was not pres-

ent during quiet breathing or chemical stimulation. During quiet breathing in the 11 other subjects, the arytenoideus exhibited phasic activity during expiration and usually tonic activity throughout the respiratory cycle. Phasic and tonic arytenoideus activity decreased under hypoxic and hypercapnic conditions. At higher levels of chemical stimulation in many subjects, short abrupt bursts of activity were frequently present at the transitions between inspiration and expiration. To determine the mechanical effect of the latter electromyographic findings, arytenoideus activity and fibre-optic images of the glottic aperture were simultaneously recorded in nine additional normal adult human subjects during progressive hyperoxic hypercapnia. The short abrupt bursts of arytenoideus activity were usually associated with a decrease in glottic aperture, although no change and an increase in glottic aperture were observed in individual subjects. The results suggest that the arytenoideus muscle may have an important role in the control of ventilation in normal human subjects. Author.

Mondini dysplasia and congenital cytomegalovirus infection. Bauman, N. M., Kirby-Keyser, L. J., Dolan, K. D., Wexler, D., Gantz, B. J., McCabe, B. F., Bale, J. F. Jr. Department of Otolaryngology, University of Iowa College of Medicine, Iowa City. *Journal of Pediatrics* (1994) January, Vol. 124 (1), pp. 71–8.
We report a case of bilateral temporal bone anomalies in a child with symptomatic congenital cytomegalovirus infection and severe, bilateral sensorineural hearing loss identified at three months of age. High-resolution temporal bone computed tomography (HRCT) revealed bilateral findings of a short, malformed cochlea lacking an interscalar septum, a short and wide internal auditory canal, and an enlarged vestibular aqueduct, features diagnostic of bilateral Mondini dysplasia. To determine the importance of this observation, we completed HRCT in five additional children between seven months and nine years of age who had evidence of symptomatic congenital cytomegalovirus infection. One child with profound sensorineural hearing loss had severe bilateral temporal bone dysplasia with a small cochlea lacking an interscalar septum, an abnormal vestibule, and a large cochlear aqueduct. Of the remaining four children, hearing thresholds ranged from normal to prfoundly decreased, but their HRCT scans were normal to visual inspection. When inner ear dimensions of these temporal bones were compared with norms established by Pappas and coworkers, however, seven of the eight ears had short cochleas and narrow lateral semicircular canals, and three ears had short or narrow vestibules. These results indicate that congenital cytomegalovirus infection may cause anomalies or growth disturbances of the temporal bone. Author.

Epstein-Barr virus in Hodgkin's disease and site of origin of tumour. O'Grady, J., Stewart, S., Elton, R. A., Krajewski, A. S. Department of Pathology, University Medical School, Edinburgh, UK. *Lancet* (1994) January 29, Vol. 343 (8892), pp. 265–6.
Epstein-Barr virus (EBV) may be involved in the pathogenesis of Hodgkin's disease. We investigated whether EBV in Hodgkin's disease is related to the site of origin of the tumour. In 40 patients with stage I disease, there was a significant association between EBV latent membrane protein (LMP-1) expression and presentation in neck lymph nodes. There was no association in stage II-IV disease (57 cases). Nodular sclerosing subtype was rarely associated with LMP-1 expression. In some cases of Hodgkin's disease of mixed cellularity or lymphocyte predominant subtype originating in the neck, EBV may be an important aetiological co-factor. Author.

Magnetic resonance imaging of oral and maxillofacial angiomas. Yonetsu, K., Nakayama, E., Miwa, K., Tanaka, T., Araki, K., Kanda, S., Ohishi, M., Takenoshita, Y., Yoshida, K., Katsuki, T. Department of Oral and Maxillofacial Radiology, Faculty of Dentistry, Kyushi University, Japan. *Oral Surgery, Oral Medicine, Oral Pathology* (1993) December, Vol. 76 (6), pp. 783–9.
Eleven patients with oral and maxillofacial angiomas (seven hemangiomas and four lymphangiomas) were evaluated with magnetic resonance imaging using a 0.2-T permanent system and spin-echo pulse sequences. These lesions typically had signal intensities that were iso T1-weighted, similar to muscle, and high T2-weighted, greater than subcutaneous fat. Nine tumours had well- or relatively well-defined margins, and seven cases had curvilinear structures of low signal intensities in the masses on T2-weighted images. It was impossible to distinguish hemangiomas from lymphangiomas on MR images. Our experience suggested that most angiomas of oral and maxillofacial regions present special characteristics on magnetic resonance images. It is thought that information obtained with magnetic resonance images can contribute significantly to the evaluation of the extent of these lesions. Author.

Leiomyosarcoma metastatic to the oral region. Report of three cases. Allen, C. M., Neville, B., Damm, D. D., Marsh, W. Section of Oral and Maxillofacial Surgery and Oral Pathology, Ohio State University, College of Dentistry. *Oral Surgery, Oral Medicine, Oral Pathology* (1993) December, Vol. 76 (6), pp. 752–6.
Leiomyosarcoma, a malignant lesion of smooth muscle origin, is rare in the oral region. Metastatic leiomyosarcoma may originate from several potential primary sites, and the lung is the most common target tissue for metastatic deposits. This article describes three cases of leiomyosarcoma that were metastatic to the oral cavity and discusses the clinical and histopathologic differential diagnosis. Author.

Multimodality imaging of cervicofacial actinomycosis. Sa-do, B., Yoshiura, K., Yuasa, K., Ariji, Y., Kanda, S., Oka, M., Katsuki, T. Department of Oral and Maxillofacial Radiology, Faculty of Dentistry, Kyushu University, Japan. *Oral Surgery, Oral Medicine, Oral Pathology* (1993) December, Vol. 76 (6), pp. 772–82.
Actinomycosis is an uncommon chronic disease usually caused by Actinomyces israelii. It affects the soft tissue mainly but sometimes spreads to involve salivary glands, bone, or even the skin of the face and neck. Five cases have been seen in our department. Several imaging modalities were used to assist in making the diagnosis. The cases are presented and the literature reviewed. Ultrasonography was found to be a useful diagnostic tool especially in developing the differential diagnosis. Author.

Persistently altered T cell immunity in high school students with the congenital rubella syndrome and profound hearing loss. Williams, L. L., Shannon, B. T., Leguire, L. E., Fillman, R. Department of Pediatrics, Ohio State University College of Medicine, Columbus. *Pediatric Infectious Diseases Journal* (1993) October, Vol. 12 (10), pp. 831–5.
Because there are frequent progressive and autoimmune complications in children born with the congenital rubella syndrome, we evaluated immunoregulation in eight profoundly deaf adolescents with congenital rubella syndrome who lived in a state school. Serum antiviral antibodies, expressions of peripheral lymphocyte epitopes and serum soluble interleukin 2 receptor (IL-2R) content were compared with those of 16 classmates with profound hearing loss of unknown cause and of 24 age-matched, hearing students from this area. Both deaf groups showed activated but impaired T lymphocyte function compared with normals. Rubella virus alteration of T cell function was suggested in congenital rubella syndrome students by elevated numbers of both CD4+ helper and CD25+ IL-2R cells with unusually low released soluble IL-2R content. In contrast in deaf classmates elevated CD25+ and CD16+ natural killer cell groups and soluble IL-2R content with low numbers of CD4+ helper cells and CD4+ populations were of unknown etiology. Defective immunoregulation of the congenitally deaf to pathogens inherent in their environment may lead to autoimmune and other complications. Author.

Deafness, complement deficiencies and immunoglobulin status in patients with meningococcal diseases due to uncommon serogroups. Mayatepek, E., Grauer, M., Hansch, G. M., Sonntag, H. G. University Children's Hospital, Heidelberg, Germany. *Pediatric Infectious Diseases Journal* (1993) October, Vol. 12 (10), pp. 808–11.
The prevalence of deafness and complement deficiencies in association with meningococcal disease caused by uncommon serogroups of meningococci was studied in 30 patients (Group A) and 30 controls with Serogroup B disease (Group B). In Group A eight patients (26.6 per cent) had hearing impairment in contrast to only one patient (3.3 per cent) in Group B ($P<0.01$). Complement deficiency was detected in eight patients (26.6 per cent) of Group A whereas none of the Group B patients showed a defect in the complement system ($P<0.01$). Association between complement deficiencies and meningococcal disease was detected for Serogroups Y ($n = 5$; 16.6 per cent) and W135 ($n = 3$; 10 per cent). Localization of the defects revealed only complement deficiencies of the classical pathway (C8-beta or C7 defects). The levels of Ig and IgG subclasses were found to be within the normal range for all patients. Our results suggest that meningococcal diseases caused by uncommon serogroups are more often associated with deafness and late complement component defects. Author.

Comparison of clarithromycin and penicillin VK suspensions in the treatment of children with streptococcal pharyngitis and review of currently available alternative antibiotic therapies. Still, J. G., Hubbard, W. C., Poole, J. M., Sheaffer, C. I., Chartrand, S., Jacobs, R. Department of Pediatrics, Duke University Medical Center, Durham, NC 27710.?? *Pediatric Infectious Diseases Journal* (1993) December, Vol. 12 (12 Suppl 3), pp. S134–41.
In a randomized investigator-blinded study, 506 children ages six months to 12 years with positive rapid direct antigen tests for Group A beta-hemolytic Streptococcus (GABHS) received treatment with either clarithromycin suspension, 7.5 mg/kg twice daily, or penicillin VK suspension, 13.3 mg/kg three times per day for 10 days. Signs and symptoms of pharyngitis or tonsillitis were evaluated and throat cultures were obtained before treatment, once during treatment and four to six days and 19 to 25 days post-treatment. All GABHS isolates were susceptible in vitro to clarithromycin. Successful clinical responses at the end of treatment were demonstrated in 169 of 176 (96 per cent) evaluable clarithromycin-treated patients and 179 of 191 (94 per ecnt) evaluable penicillin-treated patients. GABHS was successfully eradicated at end of treatment in 168 of 183 (92 per cent) evaluable clarithromycin-treated patients compared with 162 of 199 (81 per cent) evaluable penicillin-treated patients ($P = 0.004$). There were no significant changes in hematologic or serum chemistry parameters in either group. Both drugs were well-tolerated. The incidence and nature of adverse events were similar in the clarithromycin and penicillin groups, except for gastrointestinal complaints reported in 35 of 250 (14 per cent) clarithromycin recipients compared with 12 of 256 (five per cent) penicillin recipients ($P <$ or $= 0.001$). The results indicate that twice daily clarithromycin was as safe and effective as three times daily penicillin VK in the treatment of children with streptococcal pharyngitis or tonsillitis. Clarithromycin was statistically superior to penicillin VK in the eradication of GABHS. Author.

Clarithromycin and cefaclor suspensions in the treatment of acute otitis media in children. Gooch, W. M., Gan, V. N., Corder, W. T., Khurana, C. M., Andrews, W. P. Jr. Department of Pathology, Primary Children's Medical Center, Salt Lake City, UT 84113. *Pediatric Infectious Diseases Journal* (1993) December, Vol. 12 (12 Suppl. 3), pp. S128–33.
The safety and efficacy of a new oral suspension formulation of clarithromycin were evaluated in this multicentre, Phase III, single blind, comparative trial in 379 children ages six months to 12 years with signs or symptoms of acute otitis media. Children were randomized to receive a 10-day course of clarithromycin oral suspension (7.5 mg/kg; maximum, 500 mg) or cefaclor oral suspension (20 mg/kg; maximum 500 mg) twice daily. Specific clinical response criteria were developed based on pretreatment signs and symptoms and results of tympanometry. Of the 379 enrolled patients 281 (74 per cent) were evaluable (clarithromycin, 150; cefaclor, 131). There were no demographic differences between the two groups. Fifty per cent of the patients had two to four episodes of otitis media (including the current episode) in the past 12 months; 63 per cent of the patients had an infection of moderate severity. Clarithromycin and cefaclor suspensions were similarly effective for the treatment of acute otitis media. Clinical success (cure, cure with effusion or improvement) was achieved in 86 per cent of clarithromycin-treated patients and 90 per cent of cefaclor-treated patients. The majority of bacterial isolates for which susceptibility results were available were fully or moderately susceptible to the study drugs (96 per cent clarithromycin, 92 per cent cefaclor). Both drugs were well-tolerated; adverse events considered probably study drug-related were reported by 30 (15 per cent) of clarithromycin recipients and 31 (17 per cent) of cefaclor recipients. There were no significant differences between the groups in the numbers of patients reporting events that were thought to be related to study medication. Author.

Clarithromycin vs. amoxicillin suspensions in the treatment of pediatric patients with acute otitis media. Pukander, J. S., Jero, J. P., Kaprio, E. A., Sorri, M. J. Department of Clinical Medicine, University of Tampere, Finland. *Pediatric Infectious Diseases Journal* (1993) December, Vol. 12 (12 Suppl. 3), pp. S118–21.
Clarithromycin is a new macrolide antibiotic that is active in vitro against a variety of organisms that are responsible for acute otitis media in children. The parent compound is metabolized to microbiologically active 14-hydroxy clarithromycin, which is especially active against Haemophilus influenzae. The safety and efficacy of clarithromycin and amoxicillin suspensions were compared in the treatment of acute otitis media in children 1 to 12 years of age inclusive. This was a Phase III, single blind (investigator-blind), randomized, multicentre clinical trial. Clarithromycin oral suspension was given in a dose of 7.5 mg/kg (maximum, 500 mg) twice daily, and amoxicillin suspension in a dose of 20 mg/kg (maximum, 750 mg) was given twice daily for seven to 10 days in a 1:1 ratio. Clinical evaluations were performed pretreatment, within 48 hours post-treatment and 10 to 14 days post-treatment. Myringotomy was performed in every child to obtain a microbiologic sample pretreatment and at subsequent visits as clinically indicated. A total of 79 children were enrolled, 39 in the clarithromycin and 40 in the amoxicillin treatment group. Thirty-two children were excluded from the efficacy analysis for various reasons. Clinical success (cure and improvement) rates at 0 to four days post-treatment were 93 per cent for clarithromycin and 90 per cent for amoxicillin ($P > 0.999$). Altogether 17 children (10 receiving clarithromycin, seven receiving amoxicillin) experienced some adverse event, with gastrointestinal disorders being the most common complaint. No clinically significant differences in laboratory tests were found between the groups. Author.

Comparative safety and efficacy of clarithromycin and amoxicillin/clavulanate in the treatment of acute otitis media in children. McCarty, J. M., Phillips, A., Wiisanen, R. California Medical Research Group, Fresno 93726. *Pediatric Infectious Diseases Journal* (1993) December, Vol. 12 (12 Suppl. 3), pp. S122–7.
Clarithromycin is a new macrolide antibodic with a wide spectrum of activity that includes the pathogens commonly causing paediatric otitis media. This randomized, investigator-blinded, multicentre trial compared the safety and efficacy of clarithromycin and amoxicillin/clavulanate in the treatment of acute otitis media in patients ages six months to 12 years. A total of 338 patients with acute otitis media diagnosed by otoscopy were randomized to receive clarithromycin 7.5 mg/kg twice daily, maximum 500 mg twice daily ($n = 161$), or amoxicillin/clavulanate 13.3 mg/kg three times daily, maximum 500 mg three times daily ($n = 177$), for 10 days. Treatment groups were comparable with respect to demographics, severity of infection and number of previous episodes. Efficacy was assessed by clinical examination performed within 48 hours of finishing study medication. A successful clinical response was seen in 90 per cent (121 of 135) of evaluable clarithromycin patients vs. 92 per cent (133 of 145) of evaluable amoxicillin/clavulanate patients ($P = 0.681$). Clinical failure or relapse (Post-treatment days 0 to 4) occurred in 10 per cent (14 of 135) of clarithromycin-treated patients vs. eight per cent (12 of 145) of amoxicillin/clavulanate-treated patients. Gastrointestinal adverse events were the most commonly reported in both groups. Of these events diarrhoea was the most frequent, occurring in 12 per cent (19 of 161) of clarithromycin and 32 per cent (57 of 177) of amoxicillin/clavulanate-treated patients ($P<0.001$). These results indicate that the efficacy of clarithromycin oral suspension was comparable with amoxicillin/clavulanate oral suspension in the treatment of acute otitis media in children. Clarithromycin was better tolerated than amoxicillin/clavulanate with a lower incidence of gastrointestinal side effects. Author.

Efficacy of intranasal application of povidone-iodine cream in eradicating nasal methicillin-resistant Staphylococcus aureus in neonatal intensive care unit (NICU) staff. Masano, H., Fukuchi, K., Wakuta, R., Tanaka, Y. Department of Paediatrics, Showa University School of Medicine, Japan. *Postgraduate Medical Journal* (1993), Vol. 69 Suppl 3, pp. S122–5.
We investigated the staff in our neonatal intensive care unit (NICU) for the presence of methicillin-resistant Staphylococcus aureus (MRSA) in the nasal cavity, and then applied intranasal povidone-iodine cream to the physicians and nurses working on the unit. Prior to the application of povidone-iodine cream, the isolation rate of S. aureus from the nasal cavity was 30 per cent for the physicians and nurses in contact with NICU patients (contact group), not significantly different from the 33.3 per cent rate for other hospital staff (control group). The isolation rate for the contact group decreased to 10.5 per cent after application of the cream. Although MRSA was not isolated from the nasal cavity of those in the control group, it was isolated from 13.3 per cent of those of the contact group before application of the cream. Nasal MRSA disappeared after use of the cream. No adverse reactions or abnormalities in serum levels of thyroid hormone-related substances were observed in any of the subjects. These results indicated that the nasal application of

povidone-iodine cream is safe and effective for eradicating MRSA in the nasal cavity. Author.

Small fenestra stapedectomy for management of progressive conductive deafness. Farrior, J. B. *Southern Medical Journal* (1994) January, Vol. 87 (1), pp. 17–22.
Progressive conductive deafness may be caused by otosclerosis, a bone fixation of the stapes that causes reduced transmission of sound from the eardrum to the inner ear. Since the late 1950s, stapes surgery has been considered the treatment of choice for alleviating hearing loss due to otosclerosis. Over the past 20 years, there has been a decline in the number of stapes operations done. As a result, there are concerns regarding results of the stapes surgery done today compared with the results of such surgery when it was done more frequently. In this paper, I retrospectively review 603 stapes operations that I did at the Farrior Ear Clinic between 1981 and 1991. There were 484 primary stapes operations. Hearing results using the small fenestra technique showed closure of the air-bone gap to 10 dB or less in 96 per cent of cases. During the same period, 119 revision operations were also done. The surgical technique, operative findings, and hearing results are presented. In both primary and revision stapes surgery, the hearing results of this series are compatible with the results of earlier, larger series. My findings show that stapes surgery is still the treatment of choice for hearing loss due to otosclerosis. Author.