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Abstract Selection

Postoperative emesis following otoplasty in children. Paxton, D., Taylor, R. H., Gallagher, T. M., Crean, P. M. Department of Anaesthesia, Royal Belfast Hospital for Sick Children, Northern Ireland. *Anaesthesia* (1995) December, Vol. 50 (12), pp: 1083–5.
Sixty unpremedicated children aged between 3 and 14 years, scheduled for otoplasty, were randomly divided into one of three groups to receive either ondansetron 0.1 mg kg^{-1}, droperidol 75 mg kg^{-1}, or placebo at induction of anaesthesia. All patients received a standard general anaesthetic using thiopentone, atracurium and halothane. Opioid analgesia was avoided intra-operatively and infiltration with local anaesthetic was used prior to the start of surgery. Children who received ondansetron were less likely to vomit (15%) than those who received either droperidol (40%) or placebo (60%) ($p<0.01$). This group also tolerated oral ingestion of fluids and solids earlier than those who received either droperidol or placebo ($p<0.001$). There was no difference between the placebo or droperidol group in the incidence of vomiting or time to ingestion of oral fluids and meals. Three patients in the ondansetron group had a self-terminating nodal rhythm which was not associated with any haemodynamic disturbances. Postoperatively there were no untoward incidents in any of the groups and all patients were discharged home the day after surgery. Author.

Stimulation of dispersed nasal polyp cells by hyperosmolar solutions. Souques, F., Crampette, L., Mondain, M., Vignola, A. M., Chanez, P, Bousquet, J., Campbell, A. M. Clinique des Maladies Respiratoires, Hopital Arnaud de Villeneuve, Montpellier, France. *Journal of Allergy and Clinical Immunology* (1995) December, Vol. 96 (6 Pt 1), pp: 980–5.
It has been suggested that hyperosmolarity may be one of the stimuli that provoke exercise-induced asthma and rhinitis. We investigated whether changes in osmolarity could result in increased levels of mediator release from nasal cells. Cells were dispersed from nasal polyps by enzymatic digestion and were incubated for 15 minutes with solutions of varying osmolarity obtained by the addition of mannitol to Hanks' balanced salt solution. After incubation was performed, cell supernatants were removed, and the release of 15-hydroxyeicosatetraenoic acid, prostaglandin2 leukotriene B4, and fibronectin was measured. Lactate dehydrogenase was measured to assess cell viability. Epithelial cells made up 40% to 60% of cells and mononuclear cells 40% to 65%. At 900 mOsm/kg H20, which has been suggested as the osmolarity of the fluid lining the airways during exercise, we observed a significant increase (Wilcoxon W test) in the release of 15-hydroxyeicosatetraenoic acid ($p<0.008$), leukotriene B4 ($p<0.008$), and prostaglandin2 ($p<0.008$), but no significant increase in the release of fibronectin was seen. No significant increase was seen between lactate dehydrogenase and 15-hydroxyeicosatetraenoic acid release, suggesting that the increase in mediator levels was not caused by cell death. These results show that hyperosmolar solutions can induce activation of nasal cells, which may at least partly explain rhinitis caused by exercise. Author.

Continuous nasal positive airway pressure with a mouth leak: effect on nasal mucosal blood flux and nasal geometry. Hayes, M. J., McGregor, F. B., Roberts, D. N., Schroter, R. C., Pride, N. B. Department of Medicine (Respiratory Division), Royal Postgraduate Medical School, Hammersmith Hospital, London, UK. *Thorax* (1995) November, Vol. 50 (11), pp. 1179–82.
BACKGROUND: Obstructive sleep apnoea is a common condition. Treatment with nasal continuous positive airway pressure (CPAP), while effective and safe, causes nasal congestion and stuffiness in some patients. The hypothesis that this study aimed to test was that nasal CPAP with a mouth leak and subsequent unidirectional airflow across the nasal mucosa causes an increase in nasal mucosal blood flux and a fall in both nasal volume and minimal cross sectional area. A secondary aim was to study if this could be prevented by humidifying the air inspired with nasal CPAP. METHODS: Nasal CPAP was applied to eight normal subjects who kept their mouths open until they had expired 500 litres. The effect of this on nasal mucosal blood flux and nasal geometry was studied with and without humidification using a laser Doppler blood flowmeter and acoustic rhinometer. In addition, nasal mucosal blood flux was measured in four of the eight subjects before and after nasal CPAP with the mouth closed. RESULTS: Nasal CPAP using room air with the mouth closed did not result in any change in nasal mucosal blood flux; with a mouth leak nasal CPAP using room air was associated with a 65% increase in nasal mucosal blood flux. There was no change in nasal geometry. Nasal CPAP using humidified air with a mouth leak did not cause any change in nasal mucosal blood flux or nasal geometry. CONCLUSION: Nasal CPAP used with an open mouth leads to an increase in nasal mucosal blood flux. This can be prevented by humidifying the air inspired with nasal CPAP. Author.

MR imaging of nasal masses. Allbery, S. M., Chaljub, G., Cho, N. L., Rassekh, C. H., John, S. D., Guinto, F. C. Department of Radiology, University of Texas Medical Branch, Galveston 77550-0465, USA. *Radiographics* (1995) November, Vol. 15 (6), pp 1311–27.
Magnetic resonance (MR) imaging is useful in evaluating the wide spectrum of diseases that cause nasal masses. MR imaging is most helpful in (a) defining tumor margins and possible intracranial extension and (b) differentiating tumor (which has intermediate, heterogeneous signal intensity on T2-weighted images) from concurrent postobstructive sinusitis and other infectious or inflammatory masses (which have high, homogeneous signal intensity on T2-weighted images if the secretions are well hydrated). The analysis becomes more complicated in cases with desiccated and mixed composition secretions. MR imaging also allows characterization of very vascular tumors, which show flow voids or marked enhancement. Low signal intensity on T1-weighted images and marked low signal intensity on T2-weighted images are characteristic of fungal sinusitis, and fat within a nasal mass indicates a dermoid or epidermoid cyst. Idiopathic midline granuloma, Wegener granulomatosis, and 'cocaine nose' manifest as predominantly destructive midline masses. Despite the advantages of MR imaging, computed tomography remains the preferred imaging modality for evaluating nasal masses that contain calcification or originate from bone or cartilage. Author.

Influence of estrogen replacement therapy on airway reactivity. Lieberman, D., Kopernic, G., Porath, A., Levitas, E., Lazer, S., Heimer, D. Pulmonary Unit, Soroka Medical Center, Beer-Sheva, Israel. *Repiration* (1995) Vol. 62 (4), pp. 205–8.
The effect of estrogen on smooth muscle in various organs is unpredictable. Little is known about the effect of estrogen on respiratory tract smooth muscle, particularly in humans. In the present study we used the histamine challenge test (HCT) to assess the effect of estrogen replacement therapy (ERT) on airway reactivity in postmenopausal women who did not suffer from respiratory disease. Thirty-six women who were undergoing treatment at the postmenopausal clinic completed the study. All participants were nonsmokers whose pulmonary function tests were normal. HCT was performed twice before the inception of ERT, and a third time 4–6 weeks after ERT was begun. None of the 36 women demonstrated a 20% decrease in FEV1 values (PC20) after inhaling histamine at a concentration of 8 mg/ml, either before or during ERT. The maximal decrease in FEV1 values in response to the maximum concentration of histamine was significantly lower during ERT compared to the pretreatment period. The average maximal decrease in FEV1 during ERT was $2.63 \pm 2.72\%$ (mean $\pm$ DS) compared to $5.21 \pm 4.47\%$ and $6.57 \pm 5.28\%$ on the 2 tests prior to therapy ($p<0.0002$). We

concluded that ERT has an inhibitory effect on the bronchial reactivity of respiratory smooth muscle. There is no cause for concern about increased airway reactivity as an adverse effect of this therapy. Author.

Dysphonia in the elderly: diagnosis and management of age-related voice changes. Hagen, P., Lyons, G. D., Nuss, D. W. Department of Otolaryngology, Louisiana State University Medical Center, New Orleans 70112, USA. *Southern Medical Journal* (1996) February, Vol. 89 (2), pp. 204–7.
In our laryngology practice, we have noted an increasing number of elderly patients referred to us for problematic dysphonia. We present our findings of the most common disorder affecting this age group. A sample of 47 consecutive patients over age 60 with dysphonia revealed presbylaryngis, ie, age-related anatomic and physiologic changes, as the most common etiology found in this tertiary referral practice, accounting for 30% (14 patients) of new diagnoses. None of the patients with presbylaryngis received this diagnosis from the referral source. Understanding the anatomic and physiologic changes of the aging vocal tract, along with the clinical correlation of each change, is crucial in evaluating this group of patients. Managing this disorder includes specific goal-oriented speech therapy, with surgery as an adjunct should conservative therapy prove unsuccessful. Earlier recognition of this disorder and prompt intervention are key factors in reversing vocal decompensation, with a primary effect of improving the quality of life for the patient with age-related dysphonia. Author.

Topical nitroprusside may reduce histamine-induced plasma exudation in human nasal airways. Grieff, L., Andersson, M., Svensson, C., Nilsson, M., Erjefalt, I., Erjefalt, J. S., Persson, C. G. Department of Otorhinolaryngology, Lund University Hospital, Sweden. *Allergy* (1995) July, Vol. 50 (7), pp. 593–7.
Mucosal exudation of nonsieved bulk plasma is a key feature of airway defense and inflammation. We have previously observed in guinea pig tracheobronchial airways that endogenous nitric oxide (NO) of the mucosa may tonically suppress the permeability of the subepithelial microcirculation, and that topical administration of the NO donor nitroprusside may reduce plasma exudation responses. The present study examines whether nitroprusside affects histamine-induced mucosal exudation of plasma in the human nasal airway. In a dose-finding tolerability experiment, using changes in nasal patency as response, placebo and nitroprusside (1.2 and 3.6 mg per nasal cavity) were applied on the mucosal surface with a nasal-spray device. Nasal peak expiratory flow (PEF) rates were measured before the application and thereafter every third minute for 15 min. Nitroprusside produced a dose-dependent decrease in nasal PEF rates compared to placebo. Placebo or nitroprusside (7.2 mg) was then given to the right nasal cavity, followed 3 min later by challenge with saline or histamine (600 micrograms). The drug and the challenge were both applied with a nasal spray device. With a nasal pool-device, the same large part of the nasal mucosal surface was lavaged before and after the treatment/challenge. The lavage fluid levels of alpha 2-macroglobulin were measured as an index of mucosal exudation of bulk plasma. The histamine-induced lavage fluid level of alpha 2-macroglobulin was significantly higher after treatment with placebo than with nitroprusside. The present data indicate that nitroprusside may have antiexudative effects in human airways. Hence, unlike other microvascular permeability active agents, this pharmacologic principle may be active in both guinea pig and human airways. Author.

Wood dust and sino-nasal cancer: pooled reanalysis of twelve case-control studies. Demers, P. A., Kogevinas, M., Boffetta, P., Leclerc, A., Luce, D., Gerin, M., Battista, G., Belli, S., Bolm-Audorf, U., Brinton, L. A., *et al.* International Agency for Research on Cancer, Lyon, France. *American Journal of Industrial Medicine* (1995) August, Vol. 28 (2), pp. 151–66.
In order to examine the relationship between wood dust and sino-nasal cancer, data from 12 case-control studies conducted in seven countries were pooled and reanalyzed. The relative risks associated with wood-related jobs and with exposure to wood dust, measured using a job exposure matrix based on occupation and industry titles, were examined using logistic regression. The combined data set consisted of 680 male cases, 2,349 male controls, 250 female cases, and 787 female controls. A high risk of adenocarcinoma among men was associated with employment in wood-related occupations (odds ratio (OR) = 13.5, 95% confidence interval (CI) = 9.0–20.0) and the risk was greatest among men who had been employed in jobs with the highest wood dust exposure (OR = 45.5, 95% CI = 28.3–72.9) and increased with duration of exposure. The risk of adenocarcinoma also appeared elevated among women employed in wood-related jobs (OR = 2.5, 95% CI = 0.5–12.3), but the small number of exposed cases precluded detailed analysis. Women in wood dust-exposed jobs appeared to have an excess of squamous cell carcinoma (OR = 2.1, 95% CI = 0.8–5.5) which increased with duration of exposure. An increased risk of squamous cell carcinoma in men was seen only among those employed for 30 or more years in jobs with exposure to fresh wood (OR = 2.4, 95% CI = 1.1–5.0). The results of this analysis provide strong support to the association between exposure to wood dust in a variety of occupations and the risk of sino-nasal adenocarcinoma and are consistent with the results of individual participating studies, although the magnitude of the excess risk varied. The evidence in regard to squamous cell carcinomas was ambiguous and there was a great deal of heterogeneity observed in individual study results. This may be due to differences in risk associated with exposure to hardwoods and softwoods or with other, as yet to be identified, aspects of exposure. Author.

Familial microtia with meatal atresia and conductive deafness in five generations. Gupta, A., Patton, M. A. Department of Medical Genetics, St. George's Hospital Medical School, London, United Kingdom. *American Journal of Medical Genetics* (1995) November 6, Vol. 59 (2), pp. 238–41.
We describe a large family with congenital microtia, auditory meatal atresia and conductive deafness The pedigree suggests autosomal dominant inheritance with variable expression and low penetrance. The literature is also reviewed to describe the inheritance pattern and clinical spectrum noted in this rare syndrome so far. The family is unique because the set of otologic anomalies in five generations was associated with renal cysts in one of the affected members, suggesting that this oto-renal (OR) syndrome may represent a variable expression of the branchio-oto-renal (BOR) syndrome. However, the probability is that this dominant malformation syndrome is a distinct entity. Author.

Vocal cord abductor paralysis (VCAP) in Parkinson's disease: difference from VCAP in multiple system atrophy. Isozaki, E., Shimizu, T., Takamoto, K., Horiguchi, S., Hayashida, T., Oda, M, Tanabe, H. Department of Neurology, Tokyo Metropolitan Neurological Hospital, Japan. *Journal of Neurological Sciences* (1995) June, Vol. 130 (2), pp 197–202.
Vocal cord abductor paralysis (VCAP) is rare in Parkinson's disease (PD), while it is frequent in multiple system atrophy (MSA). Although VCAP is a life-threatening complication it has not yet been clarified whether there is any difference in the mechanism of VCAP between PD and MSA. Examining 3 autopsy-proven PD patients who developed severe VCAP requiring tracheostomy, we found the following differences in the mechanism of VCAP between MSA and PD: (1) clinical and laryngofiberscopic examination showed that VCAP in PD was not exacerbated during sleep, unlike in MSA; (2) On histological examination of the intrinsic laryngeal muscles, the posterior cricoarytenoid muscle demonstrated no abnormalities in PD, while the muscle showed characteristic neurogenic atrophy in MSA. There seemed to be two types of VCAP, namely the nonparalytic type observed in PD, and the paralytic type observed in MSA. Severe dysphagia requring tube-feeding was common among PD patients who presented with VCAP. Although the relationship between VCAP and dysphagia is unknown, one should be aware of the possibility of fatal VCAP in PD patients with severe dysphagia. Author.

Ectomesenchymal hamartoma (benign 'ectomesenchymoma') of the VIIIth nerve: case report. Apostolides, P. J., Spetzler, R. F., Johnson, P. C. Division of Neurosurgery, Barrow Neurological Institute, St. Joseph's Hospital and Medical Center, Phoenix, Arizona, USA. *Neurosurgery* (1995) December, Vol. 37 (6), pp. 1204–7.
We report a previously undescribed hamartoma of the VIIIth nerve, consisting of adipose tissue, Schwann cells associated with myelinated nerve fibers, well-differentiated smooth and striated

muscle fibers, and rare ganglion cells. The tumor was found in a 35-year-old Caucasian female who presented with right-sided hearing loss. The mass, which we designate an 'ectomesenchymal' hamartoma, most likely developed from pluripotent neural crest cells ('ectomesenchyme'), which are capable of differentiating into a variety of neuroectodermal and mesenchymal cell types. The development of the neural crest, the concept of 'ectomesenchyme,' and the histogenesis of this tumor are reviewed. Author.

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