

**Abstracts on this page have been chosen and edited by Dr Trevor Watts**

Anaesthetics; paediatric dentistry

## Cardiac arrhythmias in children during outpatient general anaesthesia for dentistry: a prospective randomised trial

**Blayney MR, Malins AF et al.**  
**Lancet 1999; 354: 1864-1866**

This paper suggests that sevoflurane may be a safer general anaesthetic agent than halothane.

The rare but extremely distressing deaths of children during routine dental anaesthesia usually result from respiratory difficulties or sudden cardiovascular collapse. The latter event may be precipitated by ventricular arrhythmia, in which halothane can be implicated. In this study, 150 children aged 3–15 years receiving dental extractions were randomized to general anaesthesia with sevoflurane (2 groups: incremental dose up to 8% or immediate dose 8% with 4% maintenance) or halothane (1 group: incremental to 3%; 1.5%) supplementation of 66% nitrous oxide in oxygen. Pulse oximetry and ECG were used throughout.

All 3 groups were similar for age, weight, number of teeth extracted and duration of anaesthesia. Six children were uncooperative regarding ECG, and excluded from the study. No arrhythmias occurred before anaesthesia, but 48% were thus affected in the halothane group, 8% in the incremental sevoflurane group and 16% in the 8% immediate sevoflurane group. Transient hypoxaemia from other causes occurred in 7 patients. The authors consider sevoflurane the agent of choice for dental anaesthesia in children, but also emphasize the need to reduce unnecessary GA use.

Orthodontics; endocrinology

## Effect of low-dose testosterone treatment on craniofacial growth in boys with delayed puberty

**Verdonck A, Gaethofs M et al.**  
**Eur J Orthod 1999; 21: 137-143**

Testosterone used in delayed puberty improves height and craniofacial growth

Seven boys initially aged 14.6–16.2 years with delayed puberty (testicular volume < 4 ml) were compared with 37 normal controls aged 12–14 years over a period of 1 year. During the year, the experimental group received 25 mg of testosterone propionate twice-monthly for 6 months, and one subject receiving treatment for only 3 months was subsequently excluded from the study. A control sub-group was matched to the experimental group by height and genital development.

The significant differences between total control and experimental groups at the start were: height (respective medians 160 v. 148

cm); nasion to basion (10.9 v.10.4); nasion to anterior nasal spine (5.7 v. 5.4) and articulare to gonion (4.5 v. 3.9). After 1 year, only the difference in height remained significant (168 v.158; other features: 11.2 v.10.9, 5.9 v. 5.6 and 4.7 v.4.3). When the matched sub-group of controls was compared with the experimental group, the latter had significantly greater growth rates of statural height, facial height and mandibular length.

Oral medicine; metabolic medicine

## Glycaemic disorders in denture stomatitis

**Vitkov L, Weitgasser R et al.**  
**J Oral Pathol Med 1999; 28: 406-409**

Type 2 diabetes mellitus may not be causally related to denture stomatitis, but the latter may be a marker for the former.

An association has been noted between denture stomatitis and diabetes, but the reasons for this relationship are not clear. In 82 Austrian patients with stomatitis under complete dentures, oral *Candida* and glucose tolerance were examined. A control group of 40 complete denture wearers without mucosal disease or cheilitis was also examined for *Candida*.

In the control subjects, no significant *Candida* was identified, but it was highly apparent in stomatitis subjects. In the latter group over 50 years, 35% had type 2 diabetes, and 39% impaired glucose tolerance or impaired fasting glucose. Under 50 years, no one had diabetes, and 30% had the other conditions. The authors point out that in this cross-sectional study, denture stomatitis onset preceded the age of diabetes development. The prevalence of diabetes was also several times higher than in the general population.

Oral medicine; neurology

## Trigeminal sensory neuropathy. A study of 35 cases

**Dumas M, Pérusse R et al.**  
**Oral Surg 1999; 87: 577-582**

One third of patients had a pre-existent diagnosis related to the symptoms, and the condition was usually unilateral.

Over a period of 10 years, 35 patients with sensory disturbance of the face, usually numbness, presented or were referred from a Canadian population of some 3 million people. Full clinical examination included tests of sensory function and all appropriate follow-up investigations. Patients with iatrogenic origins for the condition were not included in this study.

In 16 cases, the condition arose from neoplastic or cystic conditions: 6 primary jaw tumours and 1 keratocyst, 6 metastases to the jaws and 3 cerebral tumours. There were 5 cases of multiple sclerosis, 5 cases labelled idiopathic in which no cause was identified, and several other causes including osteomyelitis and systemic conditions such as diabetes.

The authors stress the need for exhaustive examination of patients with this condition. Immediately preceding this paper in the journal, there is also an account from a London hospital of 9 cases of the condition (Shotts et al., *Oral Surg* 1999; 87: 572-576), with 4 resulting from malignancy, 2 from connective tissue disease and 3 of unclear origin.