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Oral medicine

Oral malodor in children and volatile sulfur compound-producing bacteria in saliva: preliminary microbiological investigation

Paryavi-Gholami F, Minah GE et al.
Pediatr Dent 1999; 21: 320-324

Certain bacteria were present at higher levels in children with halitosis than in those without it.

Ten children aged 2-7 yrs were selected for investigation on the basis of an unsolicited complaint of halitosis as determined by a parent or dentist. All had been examined and found to be free of caries. As controls, 10 subjects were matched by age and development of dentition; their parents stated that they did not manifest oral malodour, in response to a specific question.

All children were given a complete oral examination, and a saliva sample was collected with a sterile swab for 1 minute. No children in the test group had caries or restorations, but there was significant caries activity in the controls. Saliva was cultured anaerobically on three media. There was a significantly higher concentration of volatile sulphide-producing bacteria in the saliva from test subjects, and *Prevotella oralis* was at a much higher level in these children. This organism and *Veillonella* species accounted for most of the sulphide production.

Oral pathology

The impact of extranodal spread of lymph node metastases in patients with oral cancer

Shingaki S, Nomura T et al.
Int J Oral Maxillofac Surg 1999; 28: 279-284

Where tumours had spread through the lymph node capsule to perinodal tissue, 5-year survival rates were approximately halved.

Previous studies have identified the histological demonstration of extranodal spread (ENS) as a significant prognostic factor for head and neck squamous cell carcinoma (SCC). In this retrospective study, the treatment records were examined of 61 patients (mean age 56 yrs; range 36-80) with proven nodal metastasis from oral cavity (n = 57) or oropharyngeal (4) SCC. All patients had radical neck dissections for a variety of reasons; 44 had positive nodes on examination. The neck was given thorough radiotherapy, in most cases with a linear accelerator.

In 28 patients ENS was found. Incidence increased with nodal staging from 29% to 68%. No other clinical or histological diagnostic factors related significantly to ENS. Mean follow-up was 4.8 yrs (5 mo - 25 yrs). 23 had died of the SCC, 16 (70%) of whom had ENS. 10 patients had died of intercurrent disease. Of the survivors, 10 had ENS. The strongest indicator of reduced disease-specific survival was ENS ($P < 0.01$). ENS was present in 80% of patients in whom distant metastases developed (11/14); this is the critical factor limiting survival.

Paediatric dentistry

Association between early weaning, non-nutritive sucking habits and occlusal anomalies in 3-year-old Finnish children

Karjalainen S, Rönning O et al.
Int J Paediatr Dent 1999; 9: 169-173

Early introduction of bottle-feeding may lead to development of posterior crossbite.

In this study, a random sample of families was selected from a long term study on atherosclerosis prevention, and 148 children of mean age 3 yrs 2 months were included (83% response rate). Parents were interviewed and children's mouths were examined.

According to the parents' response, 30 children had practised non-nutritive sucking habits (use of a pacifier or digit-sucking), and the remaining 118 had not. In the former group, 3/5 had an anterior open bite, as opposed to 1/12 of the latter ($P < 0.001$). However, posterior crossbite and overjet did not differ significantly according to sucking habits.

Further analysis showed that the duration of exclusive breast-feeding was shorter in 19 subjects identified with posterior crossbite than in others (3.6 v. 6.1 months; $P < 0.01$), and the total duration of breastfeeding was also shorter (4.7 v. 7.6; $P < 0.002$). However, there were no significant differences in these parameters for overjet (0-3mm v. >3 mm) or anterior open bite.

The authors discuss the results and consider their breastfeeding data to be more accurate than those of previous studies, leading to the conclusion that early weaning may be implicated in both anterior open bite and posterior crossbite.

Oral and maxillofacial surgery

Is the mandibular third molar a risk factor for mandibular angle fracture?

Ma'aita J, Alwrikat A
Oral Surg 2000; 89: 143-146

Where an impacted mandibular third molar is present, fracture of the angle in response to trauma appears more likely.

Over a 6 year period, 685 consecutive patients presented with mandibular fractures in a group of military hospitals in the Middle East. For several reasons, 70 patients were excluded from this study. The remaining 615 patients (mean age 33, range 17-75 yrs, 80% male) had 713 mandibular fractures. Causes were: road traffic accidents (61%), falls (20%), fights (15%), and sports/miscellaneous (5%).

Third molars were present in 426 patients, and about 1/3 of these had angle fractures, but in 189 patients without third molars, 2/15 had angle fractures ($P = 0.001$). Where the molars were unerupted, the relative risk of angle fracture was 5.6 times that for an erupted tooth; for partial eruption, the risk was 1.9. The authors discuss related studies and conclude that angle fracture is more likely with presence of a third molar, particularly if it is vertically or distoangularly impacted.