Cephalometry is an important predictor of sleep-related breathing disorders in children

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Sleep-related breathing disorders (SBD) have been studied and treated for a long time in adults, but little attention has been given to children, for whom SBD may be as serious as for adults. Parents, guardians and healthcare personnel should pay close attention to these problems, which may be treated during childhood. Their effects on everyday life, such as hyperactivity and poor school achievement, may have a severe impact on the development of an individual and may clearly affect health.

The relevance of this problem has motivated authors to evaluate the cephalometric characteristics of children with SBD.[1] Cephalometry is an important facial morphometry tool available practically all over the world. This study sample included 70 children (34 boys; mean age = 7.3±1.72 years) who usually snored and had symptoms of sleep-related obstructive breathing disorders for over 6 months. Nocturnal polysomnography was used to divide children into 3 groups: 26 children with a diagnosis of obstructive sleep apnea (OSA); 17 with signs of upper airway resistance syndrome (UARS), and 27 snorers. The control group had 70 children with no breathing obstructions paired for age and sex. Lateral head radiographs were obtained, and cephalograms were traced and measured.

Children with SBD had a shorter mandible (P = 0.001) and a greater inclination in relation to the palatal plane (P = 0.01). Anterior face height (P = 0.01) and lower face height (P = 0.05) were greater than in control children. Their soft palate was longer (P = 0.018) and thicker (P = 0.002). Airways had a smaller diameter in the nasopharyngeal region, but the oropharynx had a greater diameter at the base of the tongue (P = 0.01). The hyoid bone was placed at a more inferior position (P < 0.01), and craniospinal angles were greater than those found in the control group, in which children had no breathing obstruction.

When divided in subgroups according to disease severity, children with OSA had significant differences from children in the control group, particularly for the oropharyngeal variables. Children with UARS and snoring also had differences from the control groups, but subgroups with obstruction were not reliably distinguished from each other by cephalometric measures. Logistic regression revealed that UARS and OSA were associated with a decrease in pharyngeal diameter in the adenoid and uvula tip regions, an increase in its diameter in the region of the base of the tongue, and a thick soft palate. In addition, their maxilla had a more anterior position in relation to the cranial base.

This is an important study because it shows that cephalometry may be an important predictor of SBD in children. Special attention should be given to the pharyngeal measures. Children with SBD should undergo systematic orthodontic evaluations because of the effects of OSA on the development of craniofacial bones. The orthodontist is the specialist with the best knowledge of the diagnostic tools for these cases and may substantially contribute to improving health and quality of life of children with SBD.

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Should teeth be extracted at the beginning of prosthetic treatment?

The usual first option for dentists and laypeople when a tooth has problems is to treat and preserve it. However, clinical management often has to be less conservative. Therefore, dentists often face the difficult task of deciding about the effect and importance of the multiple risk factors of periodontal, endodontic or prosthetic origin that may affect the prognosis of an abutment. The relevance of this topic and the changes in concepts due to the development of new techniques in the different dental specialties led the authors to conduct a review whose purpose was to summarize the critical factors involved in decisions about whether a problematic tooth should be treated and preserved or extracted and possibly replaced with an implant.[2]

A literature search was conducted for peer reviewed studies published in English and found in MEDLINE (PubMed) from 1966 to 2009. Different keyword combinations were used, such as treatment plan and decision making, periodontics, endodontics, dental implants or prosthesis. In addition, the reference lists of all relevant studies and reviews were surveyed.

The study concluded that tooth preservation and the acceptance of risks are properly defined for several situations. At first, the tooth should be preserved if not extensively damaged and when it has a strategic value, either esthetic or functional. This applies especially for patients with implant contraindications. Moreover, preservation is further recommended in case the tooth is in an intact arch, and when the preservation of the gingival structures is fundamental.

In contrast, when restorations are planned for all the mouth, the strategic use of tooth implants is recommended. In addition, several smaller fixed prostheses, either implants or abutments, may be used. In this case, teeth whose long-term prognosis is excellent should be selected. These procedures ensure that the risk of failure of all the restorations will be reduced.

Obesity is associated with periodontal infection

A common observation made by clinical dentists is that obese patients seem to have more frequent periodontal infections than the rest of the population. This possible association, relevant because additional care should be provided for obese people, has been recently analyzed in an adult population.[3]

The study included 2,784 dentate, non-diabetic individuals aged 30 to 49 years. Obesity was assessed according to body mass index (BMI), body fat percentage (BF%) and waist circumference (WC). The extension of periodontal infection was assessed using the number of teeth with periodontal pockets (whose depth was equal to or greater than 4 mm) and was classified into four categories 0; 1-3; 4-6; 7 or more.

The authors found a significant positive association between the number of teeth with deep periodontal pockets and BMI. The association was found among both men and women, and also among those who never smoked. The number of teeth with deep periodontal pockets was also associated with BF% and WC among individuals who never smoked.

This study results suggest that periodontal infection, measured according to the number of teeth with deep periodontal pockets, seems to be associated with obesity. However, no causal inference may be made, and further studies should elucidate the role of periodontal infection in obesity. However, findings suggest that the periodontal health of obese patients deserves special attention.

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