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Prevalence of the risk of pediatric sleep disordered breathing and its associated co-morbidities in the orthodontic population

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Objectives: 1) To determine the prevalence of positive risk for pediatric sleep disordered breathing (SDB) in the orthodontic population and compare it to a general healthy pediatric population; 2) To determine the prevalence of SDB-associated co-morbidities in the orthodontic population.

Methods: Responses from Pediatric Sleep Questionnaires (PSQ) were collected from 390 patients between the ages of 5-16 who were seeking orthodontic treatment. Prevalence of overall SDB risk, habitual snoring and sleepiness were determined in the orthodontic population and compared to those obtained by identical means from the general pediatric population by Archbold et al. (2002). Additional health history information obtained from 130 of the patients were used to assess the prevalence of associated co-morbidities in the high risk SDB population.

Results: At 10.8%, prevalence of positive SDB risk was found to be significantly higher in the orthodontic population than a general healthy pediatric population (5%). The prevalence of snoring and sleepiness in the orthodontic population were 13.3% and 17.9% respectively. Among the co-morbidities, nocturnal enuresis (13.6%), being overweight (18.2%) and having ADHD (31.8%) had a significantly higher prevalence in the group of patients with higher SDB risk ($P < 0.05$).

Conclusions: The prevalence of the risk of pediatric SDB in the orthodontic population is higher than in the healthy pediatric population and can be associated with other co-morbidities. These findings should prompt the orthodontic practitioner to screen for SDB through the patient's medical history and clinical examination.