

Clinicals And Upper Airway Characteristics in Obese Children with Obstructive Sleep Apnea

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ABSTRACT

Introduction: Obesity is a factor that is strongly related to the occurrence of obstructive sleep apnea (OSA) in adults, although this association remains controversial for children. **Objective:** The aim of this study was to compare the clinical and upper airway characteristics, obtained by questionnaires, physical examination and laboratory tests, among obese children with and without OSA. **Method:** This was a prospective cohort study. 44 obese children (body mass index above the 95th percentile) were included in the study. Questionnaires, physical examination of the upper airway, nasofibrolaryngoscopy, polysomnography, and laboratory allergic tests were performed. **Results:** There were 22 male patients (50%), and the mean age was 7.6 ± 2.5 years. OSA was present in 19 (43%) patients. There were no statistically significant differences between the groups with and without OSA, in relation to clinical or laboratory allergic parameters. For the upper airway assessments, hypertrophy of the pharyngeal ($p=0.001$) and palatine ($p=0.049$) tonsils were the only parameters associated with OSA, and a modified Mallampati index of class III/IV also demonstrated a tendency towards being statistically associated with OSA ($p=0.081$). Moreover, these findings were confirmed to be factors associated with OSA in this group of children according to a logistic regression analysis. **Conclusions:** The occurrence rate of OSA in this obese pediatric population was high. Adenotonsillar hypertrophy and a modified Mallampati index of class III/IV were the factors associated with OSA.

Keywords: Obstructive sleep apnea; Obesity; Physical examination; Palatine tonsil; Pharynx.

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