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Title: Evaluation of the prevelance of obstructive sleep apnea in children who have narrow maxilla or retrognathic mandibula with habitual snoring

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Body: Bachground: Obstructive sleep apnea syndrome (OSA) is a disorder of breathing during sleep characterized by prolonged partial upper airway resistance and intermittent partial or complete obstruction that disrupts normal ventilation. OSA in pediatric population is estimated to be 2-3%. Habitual snoring in a prevelance of 6-12 % is the primary symptom in pediatric population however apnea can be determined in only 10-30% of these children. Skeletal problems such as transverse maxillary constriction and mandibular retrognathia increases the risk of OSA. The aim of this study is to evaluate the prevelance of OSA in children who have narrow maxilla or retrognathic mandibula with habitual snoring. Methods: Polysomnography was performed in 36 children (15 girl, 21 boy) between the ages of 8-14 who have narrow maxilla or retrognathic mandibula with habitual snoring. The children with retrognathic mandibula had the SNA angle less than 80° and ANB angle greater than 4° and the children with narrow maxilla had bilateral cross bite. Of these 36 children 7 had narrow maxilla and 29 had retrognathic mandibula.Results: Of the 7 children who had narrow maxilla; severe OSA was present in 2 and mild OSA in 2. Of the 29 children who had retrognathic mandibula; severe OSA was present in 2, moderate OSA in 1 and mild OSA in 4. Conclusions: OSA was determined in the 30.5% of the study sample. This finding shows that the children who have narrow maxilla or retrognathic mandibula with habitual snoring are in the high risk group in terms of OSA.