Cephalometric diagnosis of obstructive sleep apnea in Tunisian subjects: a case-controlled study

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ABSTRACT
Objective: The main objective of this case-controlled study was to determine the anatomic risk factors responsible for the appearance and severity of Obstructive Sleep Apnea (OSA).
Methods:Lateral radiographs of 33 patients with OSA, whose diagnosis was already confirmed by polysomnograpy (PSG), were compared to those of 33 control subjects. Seven anthropometric and 20 cephalometric variables were studied. The statistical analysis was performed using the SPSS version 17 and the significance rate was set at 5%.
Results: the findings of our study support the literature data showing that patients with OSA are older and fatter [BMI: 36,94kg/m² vs 23,21kg/m², p=0,000], and have more craniofacial anomalies manifested by an inferiorly positioned hyoid bone (H_MP: 20,13mm vs 13,48mm ; H_C3: 36,81mm vs 43,10mm ; H_ENA: 99,45mm vs 90,66mm ; p=0,000) and a narrower oropharynx associated with an increase of the tongue and soft palate length p(UH)=0,010 and p(UL)=0,000, p(TgLt)= 0,000). Conclusion: Fatty subjects with craniofacial abnormalities are more predisposed to develop OSA.

Keywords: obstructive sleep apnea, cephalometry, diagnosis, hyoid bone.