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## **[The study on the correlation between the effect of dental appliances on OSAS and the morphology of upper airway and craniofacial structures]**

[Article in Chinese]

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**OBJECTIVE:** The purpose of this present study was to evaluate the effectiveness of dental appliances on OSAS by combining the use of overnight polysomnography and cephalometry. **METHODS:** 22 OSAS adult patients wore the dental appliances designed by authors. The association between the improvement of respiratory variables and the cephalometric variables were investigated on the basis of linear correlation analysis. We also classified the subjects by AI of post-treatment to analyze the morphological disparity of upper airway and craniofacial structures among the groups. **RESULTS:** There was no significant correlation between the improvement of AI and the morphology of the upper airway and its surrounding soft structures, but there existed significant linear correlation between the improvement of AI and the morphology of the craniofacial skeletal structure. The improvement of the lowest SaO<sub>2</sub> was only correlated significantly with the body length of the mandible and the anteroposterior position of the base of tongue. However, the improvement of the RDI wasn't associated significantly with any morphological variables. In addition, there were morphological differences among the different groups. **CONCLUSION:** The above findings suggested that the effectiveness of dental appliance on OSAS is mainly associated with craniofacial skeletal structures, but no correlation existed between the sagittal dimension of upper airway and the effectiveness.

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