

Changes in dentofacial morphology after adeno-/tonsillectomy in young children with obstructive sleep apnoea--a 5-year follow-up study.

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The aim of this study was to compare a number of dentofacial variables and airway space in children suffering from obstructive sleep apnoea (OSA) syndrome with the corresponding variables in control children exhibiting a normal breathing pattern, to study the development of these variables prospectively over a 5-year-period following treatment for OSA, and to compare the recorded changes with the corresponding changes occurring in the controls. The subjects were 17 children (10 boys and 7 girls, mean age 5.6 years) diagnosed with OSA syndrome. The treatment for the OSA was adeno-/tonsillectomy. The control group comprised 17 age- and gender-matched children (mean age 5.8 years) without breathing problems. Lateral cephalograms were taken of the OSA children at baseline and then at 1, 3, and 5 years post-treatment. The control records comprised registrations at baseline and then after 1 and 5 years. In comparison with the controls, the OSA children exhibited a more posteriorly inclined mandible ($P < 0.05$), a more anteriorly inclined maxilla ($P < 0.001$), a greater lower anterior face height ($P < 0.01$), a shorter anterior cranial base ($P < 0.01$), retroclined upper and lower incisors ($P < 0.05$ and $P < 0.01$, respectively), reduced airway space ($P < 0.05$ and $P < 0.01$), and a less pronounced nose ($P < 0.05$). At 5 years post-treatment, there were no statistically significant differences between the groups except for the lengths of the anterior cranial base and the nose which were still shorter ($P < 0.05$) in the patient group. OSA in young children has an unfavourable effect on the development of several dental and facial components. However, if OSA is diagnosed and treated at an early age, an almost complete normalization of dentofacial morphology may be achieved.

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