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Nasal respiratory resistance and head posture: effect of intranasal corticosteroid (Budesonide) in children with asthma and perennial rhinitis.

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The influence of mouth breathing on craniofacial development has previously been demonstrated. Recent investigations do indicate, however, that head posture also might be related to craniofacial morphology. The aim of the present study was to analyze the effect of a topical steroid spray (Budesonide) on nasal respiratory resistance and head posture in children with asthma and nasal obstruction. Thirty-seven children, 8 to 15 years of age, with bronchial asthma, perennial allergic rhinitis, and subjectively assessed mouth breathing were selected for the study. Rhinomanometric and cephalometric analyses were performed. Head posture was defined as the position of the head relative to the cervical column and to the true vertical. After the first examination the children were randomly allocated to two groups, of which one group was treated intranasally with Budesonide (N = 18) and the other with placebo (N = 19), for a double-blind study. After one month of treatment, there was a statistically significant decrease in nasal resistance (p less than 0.001) and an increased flexing of the head (p less than 0.01) (paired t tests) in the children under active treatment. No significant changes were seen in the placebo group. The results indicate that Budesonide nasal spray is capable of reducing nasal obstruction in allergic children and that a reduced nasal resistance leads to a decrease in craniocervical angulation. The clinical importance of these results is yet to be clarified.

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