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Relationship between mandibular incisor crowding and nasal mucosal swelling.

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In this study, cephalometric and dental cast variables relating to 30 male and 20 female children, 8 to 13 years old with chronic nasal mucosal swelling, were compared with those relating to age- and sex-method controls. These controls were orthodontically untreated subjects with no histories of airway obstruction. The children with chronic nasal mucosal swelling had been referred because of chronic difficulties with nasal breathing to the Department of Otolaryngology Airflow Laboratory at the Hospital for Sick Children in Toronto. Previously active posterior rhinomanometry with a head-out volume displacement plethysmograph had been used to measure nasal resistance in 1000 consecutive subjects. Participants in the study reported here were selected from subjects whose nasal resistance fell markedly following administration of a decongestant spray. The subjects selected were found to have significantly (p less than 0.001) more mandibular incisor crowding, significantly (p less than 0.01) smaller mandibular arch widths than the controls, and significantly (p less than 0.001) smaller maxillary arch widths than the controls. The male subjects had significantly (p less than 0.01) smaller mandibular arch widths than the male controls.

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