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The Angle Orthodontist: Vol. 67, No. 2, pp. 103–110.

Association between facial height development and mandibular growth rotation in low and high MP-SN angle faces: A longitudinal study

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ABSTRACT

Two groups of children with low (n=29) and high (n=29) MP-SN angles were followed longitudinally from 6 to 15 years of age. The purpose was to thoroughly examine associations between vertical craniofacial growth and mandibular growth rotation. Correlations between dimensional and rotational variables occurred in different variable pairs in the two groups and changed with age. Increase in posterior lower facial height distinguished itself by being consistently positively correlated with forward matrix rotation irrespective of mandibular plane angle or age. The same applied to increase in ramus height. Increase in lower anterior facial height was, surprisingly, weakly correlated with mandibular rotation, but strongly and positively correlated with increase in corpus length. Overdevelopment of lower anterior facial height in high angle cases occurred because the steep mandibular plane directed corpus growth more downward than normal, not because the mandible rotated backward.

KEY WORDS: Facial height, Mandibular rotation, MP-SN angle, Longitudinal, Cephalometrics.

Submitted: May 1995

Accepted: March 1996.