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MANDIBULAR GROWTH IN CLASS II PATIENTS WITH SKELETAL DYSPLASIA, AFTER THE PUBERTAL GROWTH SPURT

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Background: Class II malocclusion is a common clinical problem in North America. Treatment timing depends on the severity of malocclusion, on treatment modality and on skeletal maturation.

Objectives: To evaluate the extent of mandibular growth, after the peak in pubertal growth, in Class II patients with a severely undersized mandible.

Materials and Methods: 27 subjects with Class II division I malocclusion (13m, 14f) were selected from six longitudinal growth centers. Subjects were selected using lateral cephalometric radiographs at: (T1) after the pubertal growth spurt (CVM stage 4, 5, or 6) and (T2) minimum 2 years after T1. Each subject had ANB ≥ 6 and maxillo-mandibular length difference ≤ 19.5 . 27 controls were selected with Class I occlusion matched for age, gender, and CVM stage.

Results: Mandibular growth between T1 and T2 was 1.1 mm less for every year increase of age at T1. Males grew about twice as much as females between T1 and T2 (4.0 mm versus 2.1 mm). Differences in growth between class I occlusion and class II occlusion were 2.6 versus 2.7 mm respectively.

Conclusions: Early surgical treatment of patients with severe skeletal dysplasia should be cautious of potential post-pubertal mandibular growth.