
**INTRODUCTION:**
Bone-anchored maxillary protraction has been shown to be an effective treatment modality for the correction of Class III malocclusions. The purpose of this study was to evaluate 3-dimensional changes in the maxilla, the surrounding hard and soft tissues, and the circummaxillary sutures after bone-anchored maxillary protraction treatment.

**METHODS:**
Twenty-five consecutive skeletal Class III patients between the ages of 9 and 13 years (mean, 11.10 ± 1.1 years) were treated with Class III intermaxillary elastics and bilateral miniplates (2 in the infrazygomatic crests of the maxilla and 2 in the anterior mandible). Cone-beam computed tomographs were taken before initial loading and 1 year out. Three-dimensional models were generated from the tomographs, registered on the anterior cranial base, superimposed, and analyzed by using color maps.

**RESULTS:**
The maxilla showed a mean forward displacement of 3.7 mm, and the zygomas and the maxillary incisors came forward 3.7 and 4.3 mm, respectively.

**CONCLUSIONS:**
This treatment approach produced significant orthopedic changes in the maxilla and the zygomas in growing Class III patients.