

Volume 79, Issue 2
(March 2009)
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Madhur Upadhyay, Sumit Yadav, K. Nagaraj, Ravindra Nanda (2009) Dentoskeletal and Soft Tissue Effects of Mini-Implants in Class II division 1 Patients. The Angle Orthodontist: Vol. 79, No. 2, pp. 240-247.

Original Articles

Dentoskeletal and Soft Tissue Effects of Mini-Implants in Class II division 1 Patients

Madhur Upadhyay^a, Sumit Yadav^b, K. Nagaraj^c, and Ravindra Nanda^d

Abstract

Objective: To examine the skeletal, dental, and soft tissue treatment effects of retraction of maxillary anterior teeth with mini-implant anchorage in nongrowing Class II division 1 female patients.

Materials and Methods: Twenty-three patients (overjet ≥ 7 mm) were selected on the basis of predefined selection criteria. Treatment mechanics consisted of retraction of anterior teeth by placing mini-implants in the interdental bone between the roots of the maxillary first molar and second premolar. A force of 150 g was applied, bilaterally. Treatment effects were analyzed by taking lateral cephalograms and study casts at T1 (before initiation of retraction) and at T2 (after complete space closure).

Results: The upper anterior teeth showed significant retraction (5.18 ± 2.74 mm) and intrusion (1.32 ± 1.08 mm). The upper first molar also showed some distal movement and intrusion, but this was not significant ($P > .05$). The upper and lower lips were retracted by 2.41 mm and 2.73 mm, respectively, and the convexity angle reduced by over 2° ($P < .001$).

Conclusion: Mini-implants provided absolute anchorage to bring about significant dental and soft tissue changes in moderate to severe Class II division 1 patients and can be considered as possible alternatives to orthognathic surgery in select cases. (*Angle Orthod.* 2009;79;)

Keywords: [Class II](#), [Maximum anchorage](#), [Mini-implants](#)

Accepted: April 2008;

^a Fellow, Division of Orthodontics, Department of Craniofacial Sciences, University of Connecticut Health Center, Farmington, Conn. Assistant Professor, Department of Orthodontics, KLES' Institute of Dental Sciences, Belgaum, Karnataka, India

^b PhD student, Section of Orthodontics, Department of Oral Biology, Indiana School of Dentistry, Indiana University Purdue University, Indianapolis, Ind

^c Assistant Professor, Researcher, Department of Orthodontics, KLES' Institute of Dental Sciences, Department of Orthodontics, KLES' Institute of Dental Sciences, JNMC Campus, Belgaum, Karnataka, India

^d Professor and Head, Division of Orthodontics, Department of Craniofacial Sciences, University of Connecticut Health Center, Farmington, Conn

Corresponding author: Dr Madhur Upadhyay, Fellow, Division of Orthodontics, Department of Craniofacial Sciences, University of Connecticut Health Center, Farmington, CT 06030 madhurup@yahoo.com

www.angle.org
An International Journal of Orthodontics and Dentofacial Orthopedics
70 YEARS OF LEADERSHIP
THE ANGLE SOCIETY (IHAASO)
A Publication of the Edward H. Angle Society of Orthodontists and the EH Angle Education and Research Foundation
Volume 79 (6)
November 2009

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ISSN: 0003-3219

Frequency: Bimonthly

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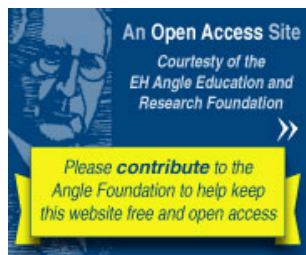
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