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CLINICAL REPORT

Orthodontic Microimplants Assisted Intrusion of Supra-erupted Maxillary Molar Enabling Osseointegrated Implant Supported Mandibular Prosthesis: Case Reports

Deepak Rai · Saranjeet Singh Bhasin · Sheetal Rai

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Abstract Loss of mandibular molars, when not replaced in time, are usually associated with overeruption of maxillary molars. To provide prosthetic replacement for missing lower posteriors, over erupted maxillary teeth have been intruded in past with great difficulty in adults with conventional orthodontics, along with associated problems of root resorption. Currently orthodontic microimplants provide stable intraoral anchorage, allow predictable maxillary molar intrusion enabling reestablishment of functional posterior occlusion with mandibular implant supported prosthesis, thereby reducing need for prosthetic crown reduction in maxillary arch. The added advantage of microimplant is it enables use of sectional appliance in area of concern instead of full arch bracketed appliance which an adult may not accept. The case reports demonstrates, overerupted maxillary molars were intruded using orthodontic microimplants to enable prosthetic rehabilitation of mandibular dentition by osseointegrated implant supported prosthesis. The second case report also demonstrates use of CBCT scan in planning and execution.

D. Rai
Department of Orthodontics, Manav Rachna Dental College, Faridabad, Haryana, India

D. Rai (✉)
G-163 Sector 41, Noida, India
e-mail: raidentalcare@gmail.com

S. S. Bhasin
Department of Prosthodontics, Faculty of Dentistry, Jamia Milia Islamia, New Delhi 110025, India

S. Rai
Dr Raidental Care and Orthodontic Centre, Noida, India

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Introduction

Creekmore [1], was the first to suggest that a small metal screw could withstand a constant force of sufficient magnitude and duration to reposition the entire anterior maxillary dentition without becoming loose, infected or pathologic. This led to the introduction of implants as orthodontic anchors.

Loss of lower posterior teeth is often accompanied with extrusion of maxillary molars, making rehabilitation of lower dentition difficult without extensive reduction of maxillary molars.

Supra erupted maxillary teeth have been intruded in the past with great difficulty in adults using *conventional orthodontics* as it was always associated with problems of extrusion of anchor teeth and even root resorption [2, 3].

Orthodontic micro implants provide stable intraoral anchorage and enable *predictable maxillary molar intrusion*. The main advantage of using micro implants is that it allows use of small sectional orthodontic appliance in the area of concern instead of full arch brackets and wires, which an adult patient genereally never accepts [4, 5].

The two case reports presented here demonstrate the intrusion of supra-erupted maxillary molars using orthodontic micro implants to enable prosthetic rehabilitation of mandibular dentition by osseointegrated implant supported prosthesis.

Case Report 1

A 42 year old female wanted replacement of missing lower right second molar (47). She had a fixed prosthesis in