

# Interdisciplinary treatment of a periodontally compromised adult patient with multiple missing posterior teeth

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This article reports the comprehensive, interdisciplinary treatment of a 50-year-old periodontally compromised adult patient with multiple missing posterior teeth. After initial periodontal treatment, the maxillary first molars and right central incisor were intruded orthodontically. Miniscrews were used to intrude the maxillary first molars by 3 mm. The mandibular arch was restored with a tooth-supported overdenture. Root coverage of the maxillary right central incisor was performed using Alloderm (Biohorizons, Birmingham, Ala). At the end of the interdisciplinary therapy, the results were esthetically pleasing, with the patient's oral functions restored to the optimum. The emphasis of this report is to highlight the importance of integrating various specialties such as periodontics, orthodontics, endodontics, and restorative dentistry toward a common goal of improving the patient's oral health, function, and esthetics. (*Am J Orthod Dentofacial Orthop* 2014;145:238-48)

Recently, more adults have been actively seeking orthodontic treatment.<sup>1</sup> In these patients, loss of teeth and periodontal breakdown cause pathologic migration of teeth,<sup>2</sup> making the orthodontic treatment more complicated.<sup>3</sup> Such patients should be treated with an interdisciplinary approach aimed not only to improve oral function and esthetics but also to prevent such problems later in life.<sup>4</sup> Therefore, before initiating orthodontic treatment, the clinician should identify the various problems, establish specific treatment objectives, formulate a definitive treatment plan, and determine the exact treatment sequence involving the various specialties of dentistry.<sup>5</sup>

The orthodontist has a special place on the team of specialists involved in the comprehensive treatment

planning for periodontally compromised adult patients with missing teeth. Adjunctive orthodontic treatment<sup>6</sup> can result in improved gingival and bone levels, traumatic occlusion,<sup>7</sup> hemiseptal<sup>1</sup> and infrabony defects,<sup>8-10</sup> excessive spacing, tipped abutment teeth, inadequate pontic or implant space, and supraeruption of teeth.<sup>2</sup>

Extrusion of the maxillary posterior teeth commonly results from a longstanding loss of mandibular antagonistic teeth. The elongated dentoalveolar segment can induce functional disturbances and interfere during prosthetic occlusal rehabilitation. Conventional options for removing such interferences include occlusal reduction with possible root canal treatment and posterior subapical osteotomy.<sup>11</sup> Orthodontic intrusion of molars was considered a difficult movement to achieve with conventional orthodontic techniques. Fortunately, the invention of various skeletal anchorage systems such as conventional prosthetic implants,<sup>3,12</sup> miniplates,<sup>13,14</sup> and miniscrews<sup>15,16</sup> has made it possible to carry out such movements.

In this article, we report the comprehensive treatment with an interdisciplinary approach of a periodontally compromised adult with multiple posterior missing teeth. The emphasis was to highlight the importance of integrating various specialties including periodontics, orthodontics, endodontics, and restorative dentistry toward a common goal of improving the patient's oral health, function, and esthetics.

## DIAGNOSIS AND ETIOLOGY

A 50-year-old woman was referred by a general dentist to the graduate orthodontic clinic of Manipal

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All authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest, and none were reported.

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Fig 1. Pretreatment facial and intraoral photographs.

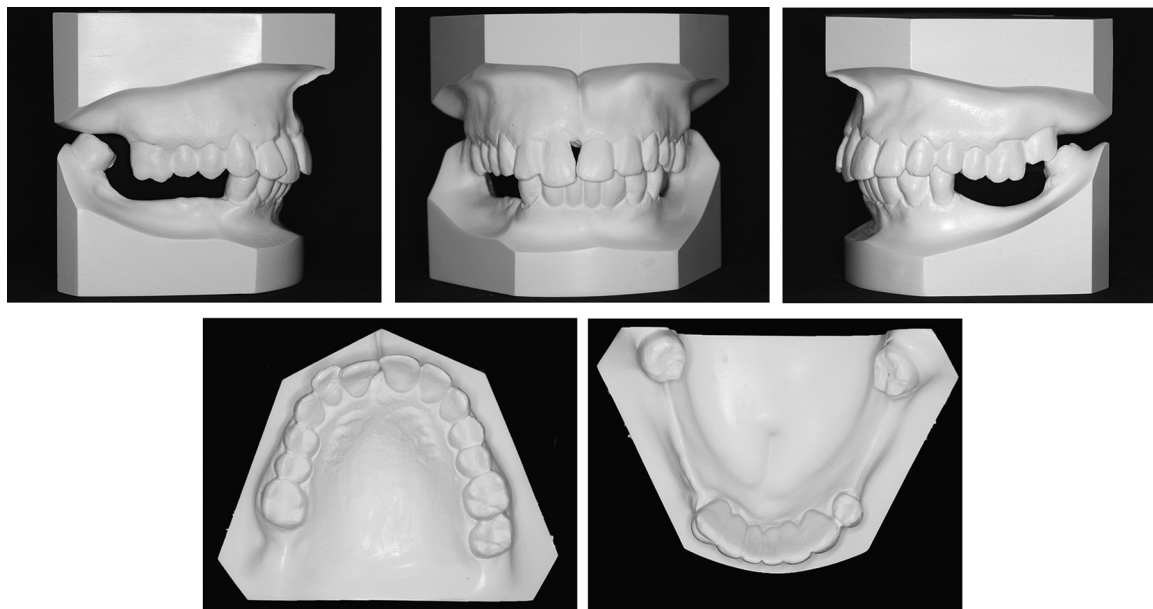


Fig 2. Pretreatment study casts.

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