



CASE REPORT

Orthodontic treatment of a complete transposed impacted maxillary canine



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Abstract Tooth transposition is a positional interchange of two adjacent teeth. Transposition most often occurs at maxillary canine. Moving transposed teeth to their normal positions is challenging because this requires bodily movement and translation of one tooth to pass another. This procedure may cause damage to the teeth or supporting structures. We report a case of complete transposition of maxillary canine and lateral incisor. Transposed teeth were successfully moved orthodontically to their normal positions. Multiple mechanics were meticulously applied to achieve complete correction of the tooth positions and to minimize root resorption and/or periodontal defects of canine and lateral incisors. Factors concerning treatment planning for transposed teeth are discussed.

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Introduction

Tooth transposition is a positional interchange of two adjacent teeth. It is identified as complete transposition when the crowns and the roots of the involved teeth exchange

places in the dental arch, and incomplete transposition (or pseudotransposition) when the crowns are transposed but the roots remain in their normal positions.¹ Tooth transposition occurs more often unilaterally than bilaterally, with maxillary prevalence, and no sex preference. Tooth transposition is significantly unrelated to dental anomalies, such as congenitally missing teeth, peg-shaped or hypoplastic teeth, and impacted teeth. Although tooth transposition

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Figure 1 Pretreatment extraoral and intraoral photographs.

may be associated with over-retained deciduous teeth, it is an isolated phenomenon rather than a syndrome.²

The etiology of tooth transposition appears to be genetically involved. Transposition most often occurs at

maxillary canine.³ Peck and Peck⁴ reviewed 71 articles with a total of 201 cases of maxillary tooth transpositions, and classified 71% of the cases as maxillary canine–first premolar transposition, 20% as canine–lateral incisor, 4% as



Figure 2 Pretreatment panoramic radiograph.

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