



Tooth transposition: a multidisciplinary approach

Mirian Aiko Nakane Matsumoto¹, Maria Bernadete Sasso Stuari¹

DOI: <https://doi.org/10.1590/2177-6709.23.1.097-107.bbo>

Tooth transposition is one of the most difficult dental anomalies to treat in the dental clinic. Several factors must be taken into account with a view of making the best decision. The aim of this study was to discuss treatment modalities for tooth transposition, their advantages and disadvantages. Additionally, it aims at presenting a clinical case of transposition between canine and lateral incisor in the upper quadrant on the right side. The treatment of choice was extraction of one transposed tooth. A multidisciplinary approach involving Orthodontics, Cosmetic Dentistry, and Periodontology was necessary to allow proper esthetic and functional outcomes to be achieved.

Keywords: Tooth transposition. Corrective Orthodontics. Tooth extraction.

INTRODUCTION

Tooth transposition is a unique and severe condition of ectopic eruption. It is defined as an interchange in the position of two permanent adjacent teeth located at the same quadrant in the dental arch. Transposition can be complete, when the position of affected teeth is totally transposed; or incomplete, when only the crowns are transposed, while the roots remain in normal position.¹

The etiology of tooth transposition has been reported as being the result of genetic influences in a multifactorial model involving mechanical interference, trauma, tooth buds in altered position, early tooth loss, and long-term retention of deciduous teeth.²⁻⁶

The incidence of transposition in the overall population is low (0.2% to 0.38%).^{6,7,8} It is most often found among women,⁷ with the majority of cases being in the maxilla (76%) of which 88% are unilateral.⁹ The canines are affected in 90% of transposition cases, most often relative to the first premolar (71%) or maxillary lateral incisor (20%).⁷

While it may be present both in the maxilla and mandible, transposition between the canine and maxillary first premolar (Mx.C.P1) is the most common, followed by lateral incisor transposed with maxillary canine (Mx.C.I2). There are no reports on transposition in deciduous dentition.¹⁰

» The author reports no commercial, proprietary or financial interest in the products or companies described in this article.

Submitted: November 20, 2017 - **Revised and accepted:** December 18, 2017

How to cite: Matsumoto MAN, Stuari MBS. Tooth transposition: a multidisciplinary approach. *Dental Press J Orthod.* 2018 Jan-Feb;23(1):97-107. DOI: <https://doi.org/10.1590/2177-6709.23.1.097-107.bbo>

» Patients displayed in this article previously approved the use of their facial and intraoral photographs.

Contact address: Mirian Aiko Nakane Matsumoto
E-mail: manakanematsu@gmail.com

¹ Universidade de São Paulo, Faculdade de Odontologia de Ribeirão Preto (Ribeirão Preto/SP, Brazil).