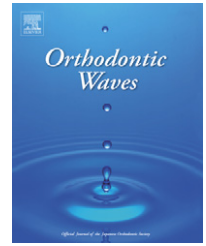


available at www.sciencedirect.comjournal homepage: www.elsevier.com/locate/odw

Case report

Orthodontic treatment of an open bite case with congenitally missing teeth using premolar autotransplantation

Masanao Minato^a, Tomoki Kataoka^a, Tatsuya Fujiki^b, Takashi Yamashiro^a,
Teruko Takano-Yamamoto^{c,*}

^aDepartment of Orthodontics and Dentofacial Orthopedics, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Japan

^bFujiki Orthodontic Office, Japan

^cDivision of Orthodontics and Dentofacial Orthopedics, Tohoku University Graduate School of Dentistry, Japan

ARTICLE INFO

Article history:

Received 11 January 2007

Received in revised form

15 May 2007

Accepted 18 June 2007

Published on line 16 July 2007

Keywords:

Congenitally missing teeth

Autotransplantation

Orthodontic space closure

Prosthetic restoration

ABSTRACT

In cases of congenitally missing teeth, it is useful to combine autotransplantation and orthodontic space closure. We treated a 12-year-old girl who showed a slight anterior open bite with congenitally missing teeth and impaction of the maxillary canine. The molar relationships were Angle Class II. We attempted traction of the maxillary canine after surgical exposure. However, we could not move it and suspected it to be ankylosed. A mandibular premolar was transplanted into the maxillary anterior region. After active treatment, a porcelain fused to metal crown was placed to restore aesthetic appearance labially. Occlusion remained stable during 4 years and 9 months of follow-up. At 8 years and 6 months post-transplantation, the donor tooth remains both clinically and radiographically healthy.

© 2007 Elsevier Ltd and the Japanese Orthodontic Society. All rights reserved.

1. Introduction

Absence of maxillary anterior teeth is not a rare phenomenon in Japanese orthodontic patients. Among patients with congenitally missing teeth, the incidence of missing maxillary lateral incisors is 14.1% in males and 12.2% in females [1]. In cases of congenitally missing teeth, it is very important to reconstruct occlusion, covering the lack of teeth. Elimination of the arch length imbalance caused by congenitally missing teeth necessitates formation of a comprehensive treatment plan which considers the possibility of orthodontic space

closure and/or a prosthetic restoration. There are other treatment options, i.e., osseointegrated implant or autotransplantation of a tooth. In a growing child, osseointegrated implants cannot adapt to growth and developmental changes in the oral region. Autotransplantation of premolars has been reported to be a useful treatment modality in cases of agenesis or traumatic loss of teeth [2,3]. High survival and success rate have also been achieved when the maxillary incisor area is the recipient site [4]. Autotransplanted teeth have the capacity for functional adaptation and preservation of the alveolar ridge [5]. This case report documents a patient who received an

* Corresponding author. Tel.: +81 22 717 8372; fax: +81 22 717 8372.

E-mail address: t-yamamo@mail.tains.tohoku.ac.jp (T. Takano-Yamamoto).

1344-0241/\$ – see front matter © 2007 Elsevier Ltd and the Japanese Orthodontic Society. All rights reserved.

doi:10.1016/j.odw.2007.06.004

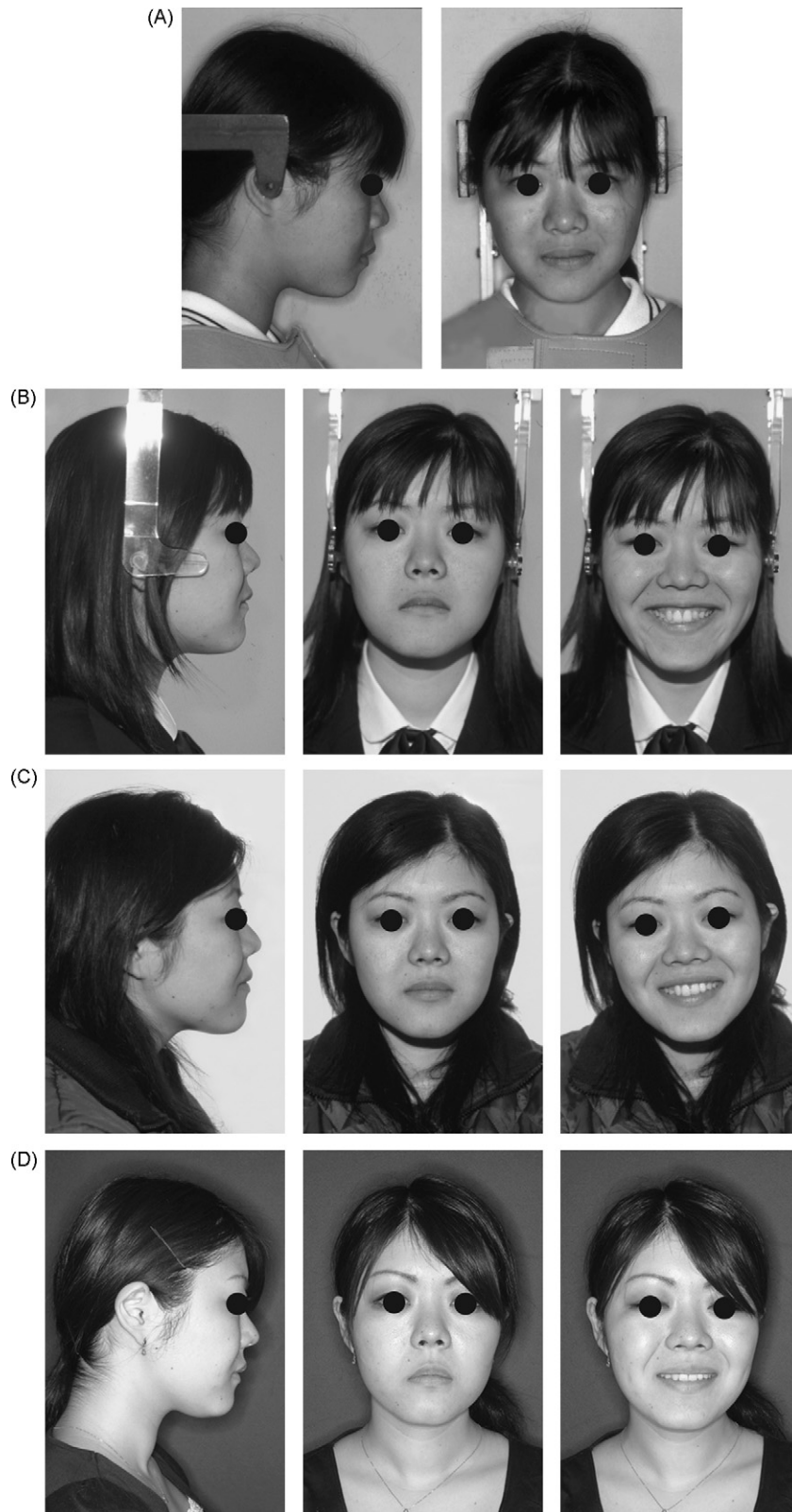


Fig. 1 – Facial photographs. (A) Pretreatment (12 years and 1 month); (B) post-active treatment (18 years and 4 months); (C) after 2 years and 1 month of retention (20 years and 5 months); (D) after 4 years and 9 months of retention (23 years and 1 month).

Download English Version:

<https://daneshyari.com/en/article/3170757>

Download Persian Version:

<https://daneshyari.com/article/3170757>

[Daneshyari.com](https://daneshyari.com)