Impacted Teeth In The Same Location Of Monozygotic Twins: A Report Of Two Cases

Corresponding Author:
Dr. Tomoki Sumida,
Senior Assistant Professor, DDS., Ph. D., Department of Oral & Maxillofacial Surgery, Ehime University Graduate School of Medicine, 454 Shitsukawa, 790-0295 - Japan

Submitting Author:
Dr. Tomoki Sumida,
Senior Assistant Professor, DDS., Ph. D., Department of Oral & Maxillofacial Surgery, Ehime University Graduate School of Medicine, 454 Shitsukawa, 790-0295 - Japan

Article ID: WMC001048
Article Type: Case Report
Article URL: http://www.webmedcentral.com/article_view/1048
Subject Categories: DENTISTRY
Keywords: Monozygotic twins, Impacted teeth, lower second premolar.

How to cite the article: Sumida T, Ishikawa A, Hamakawa H. Impacted Teeth In The Same Location Of Monozygotic Twins: A Report Of Two Cases. WebmedCentral DENTISTRY 2010;1(10):WMC001048

Source(s) of Funding:
None

Competing Interests:
None
Impacted Teeth In The Same Location Of Monozygotic Twins: A Report Of Two Cases

Author(s): Sumida T, Ishikawa A, Hamakawa H

Abstract

We have presented here the cases of a pair of monozygotic twin sisters with impaction of the lower second premolars. Tooth extraction was necessary because of the orthodontic reasons, and the teeth were sequentially extracted under local anesthesia. The patients are currently undergoing orthodontic treatment, and their clinical course after tooth extraction was uneventful. Although the impaction of second premolar is not a rare situation, it is extremely rare that these impactions in the same location are observed. In our case, the twins were monozygotic. Therefore, we suspected that the cause of the tooth impaction in the same location was influenced by the genetic background.

Introduction

Familial occurrence of impacted permanent teeth is a poorly studied condition. Like supernumerary teeth, impactions can be unilateral or bilateral, and can occur singly or a few at a time [1, 2, 3]. A review of the literature revealed that genetic factors are important in the etiology of familial cases [4]. The presence of impacted teeth in the same locations in monozygotic twins supports the genetic origin of this condition. Here, we describe the similarities in the teeth involved and in the positions of impacted teeth in monozygotic twins. The aim of this article is to report dental anomalies in monozygotic twin sisters.

Case Report(s)

A 9-year-old girl was referred to our hospital for the extraction of impacted teeth prior to orthodontic treatment. Her medical history was noncontributory, and she had an elder monozygotic twins. On intraoral clinical examination and a panoramic radiograph, both lower primary second premolars were found to be impacted (Illustration 1 A). These teeth were sequentially extracted under local anesthesia. Approximately 2 years later, the patient’s 11-year-old sister was referred to our hospital for the same reason. Her general condition was normal. On a panoramic radiograph, bilateral impaction of the lower primary second premolars was seen (Illustration 1 B). We performed tooth extraction (Illustration 2 A, B). Her second premolar was almost normal in shape because she was already 11 years old.

Discussion

Familial occurrence of impacted teeth in the same location is a poorly appreciated issue. The impacted teeth are fail to erupt into dental arch when expected time. The most frequent tooth is the mandibular third molar. The maxillary third molar and the maxillary cuspid follow. However, these conditions can frequently occur singly. In this study, we presented the presence of impacted teeth in the same location in monozygotic twins. Delayed eruption or impaction of teeth is frequently encountered in dental practice. Compared with single cases, our case suggests a genetic etiology, because these sisters have a same genetic background. In terms of the environmental factors, that can also influence the differences in the dentitions of these sisters. However their mother mentioned that these two had been taking almost same food and any endocrine abnormalities were not indicated, which led to cause tooth eruption. Actually dentitions of this sisters was the almost identical, which demonstrated that the environmental factors that the twins were exposed did not influence in oral condition. The presence of impacted teeth in the same locations in monozygotic twins is extremely rare. Therefore, we suspected that the cause of the tooth impaction in the same location was influenced by the genetic background.

Conclusion

The presence of impacted teeth in the same locations in monozygotic twins is extremely rare. Therefore, we suspected that the cause of the tooth impaction in the same location was influenced by the genetic factors.
background.

References

Illustrations

Illustration 1

Panoramic radiographs of the teeth in the younger twins (A) and the elder twin (B).

Illustration 2

(A) Tooth extraction in the elder sister. (B) The extracted tooth.
Disclaimer

This article has been downloaded from WebmedCentral. With our unique author driven post publication peer review, contents posted on this web portal do not undergo any prepĺinciple or editorial review. It is completely the responsibility of the authors to ensure not only scientific and ethical standards of the manuscript but also its grammatical accuracy. Authors must ensure that they obtain all the necessary permissions before submitting any information that requires obtaining a consent or approval from a third party. Authors should also ensure not to submit any information which they do not have the copyright of or of which they have transferred the copyrights to a third party.

Contents on WebmedCentral are purely for biomedical researchers and scientists. They are not meant to cater to the needs of an individual patient. The web portal or any content(s) therein is neither designed to support, nor replace, the relationship that exists between a patient/site visitor and his/her physician. Your use of the WebmedCentral site and its contents is entirely at your own risk. We do not take any responsibility for any harm that you may suffer or inflict on a third person by following the contents of this website.