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CASE REPORT

FAMILIAL FOURTH MOLARS IN NON-SYNDROMIC PATIENTS: CASE REPORT OF AN UNUSUAL ENTITY

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Abstract

Objectives: This work aims to report an unusual case of fourth molars in three patients from the same family.

Case Report: The patient underwent third and fourth molars removal with little morbidity. Some important aspects were discussed, in particular the use of piezosurgery. Important features of the classification and epidemiology of distomolars and paramolars were discussed. The authors believe this to be the first report of familial fourth molars.

Conclusions: Although considered a rare condition, fourth molars can be treated as an unusual or uncommon condition. The term rare is not appropriate to this situation and the authors debate it. Piezosurgery is very harmful in extensive osteotomies to remove third and/or fourth molars.

Keywords: Molar, Third; Tooth, Supernumerary; Surgery, Oral; Toothache

Introduction

Third molar surgery is always on the up. This topic is of interest to general dentists, oral surgeons, and researchers. The number of publications on third molar surgery is increasing and must continue for years.¹

The same is not true for fourth molars. Due to the lower incidence, fewer than 50 articles published and indexed on Pubmed are available over the years.

Because of the very small number of publications, some questions about this entity arise. The main

questions relate to the most appropriate surgical technique, classification, and epidemiology.² These findings regarding supernumerary teeth can be performed worldwide with significant results. In the case of distomolars, these results can be falsified by meaningless numbers. Especially in the context of some syndromes, the occurrence of distomolars in non-syndromic patients is even more unusual.

This article aims to report a case of a non-syndromic patient with four impacted distomolars. Although an uncommon entity, a familial occurrence of distomolars makes this report unique. Three female

family members with the same unusual condition. Some aspects of the use of the term “rare condition” and surgical technique were discussed.

Case Report

An 18-year-old female patient presented to our private practice with recurrent pericoronitis. In the medical history, the patient reported that she was referred by another oral surgeon because of technical issues related to the third molar surgery. No comorbidity was reported. Four impacted fourth molars could be observed on the panoramic radiograph (figure 1).



Figure 1. Panoramic radiography. Note four third molars and four distomolars

The mother underwent four different. In the anamnesis, the patient’s mother said that she had had a similar situation. The mother underwent four distinct surgeries to remove her third and fourth molars about 15 years ago. It was the request of the patient and caregivers to remove both the third and fourth molars under sedation and local anesthesia.

A preemptive medication consisting of 1g amoxicillin, 8mg dexamethasone, and 1g dipyrone was administered one hour before the operation. The patient underwent third and fourth molar removal under general anesthesia. Due to the size of the impacted teeth, a regular osteotomy was performed with a major lengthening required. Piezosurgery was used for the osteotomy and a conventional rotary drill for the odontosection. The eight teeth were extracted without difficulty in about 90 minutes.

After six days the patient presented with mild edema and trismus (figure 2), with no evidence of infection.



Figure 2. Trismus after teeth extraction

The suture has been removed. Two weeks after the operation, the patients have no trismus and no pain. Second panoramic radiography was taken to accompany the case (figure 3). Although the surgeon requested the anterior panoramic X-rays from those in charge, no examination was found.



Figure 3. Panoramic radiography after tooth extraction

At the return consultation, the patient’s sister also reported panoramic radiography showing four distomolars. This third patient has refused to cooperate in the present report and the parents have not consented to the publication of the images because the patient is a minor.

Discussion

The most commonly used classification of supernumeraries was made by Bolk in 1914.³ The author has divided the fourth molars into distomolars and paramolars. Any tooth located behind the third molar, regardless of its format, is called a distomolar. A paramolar is any tooth that is in the molar region and has significant anatomical changes. In our case, four distomolars were removed from the patient. None of the patients was syndromic.

The removal of supernumerary teeth must be carried out independently of the affected region after a risk/benefit assessment.² Common complaints of impacted molars include recurrent pericoronitis, unrecoverable tooth decay, and orthodontic or prosthetic purposes. As in our case, about 33% of the removals of third molar are due to recurrent pericoronitis.⁴

Supernumerary teeth have an incidence of about 0.5% to 1% in some articles and reach a maximum of 2 or 3%.^{2,5} The incidence of distomolars is extremely low, around 0.02%.⁶ Mandibular distomolars have a lower incidence than maxillary distomolars. There is no dominance between the sexes in the literature.⁵ The definition of a disease as a rare condition depends on the regulations of different countries, there is no universal protocol. Most countries define a rare disease as 1/2,000 patients ($p=0.0005\%$).⁷ Although there is no universal protocol, fourth molars cannot be treated as a rare disease. A common entity might be a more appropriate definition.

Piezosurgery is developing more and more into an efficient surgical technique. Although it has some disadvantages like longer uptime and cost, the advantages outweighed the disadvantages. Piezosurgery is associated with a significant reduction in the incidence of edema, trismus, and pain.⁸ The number of analgesics taken is lower compared to conventional rotary instruments.⁹ In the case of extensive osteotomies, as in the present case, the authors consider piezosurgery to be mandatory.

Conclusions

We presented the first case of four familial distomolars in nonsyndromic patients. Distomolars cannot be treated as rare entities. Although the incidence is very low, ideally the fourth molar can be treated as a common or unusual entity. In extensive osteotomies, piezosurgery is mandatory to reduce edema, pain, and trismus.

Declarations

Conflict of interest and financial disclosure

The author declares that he has no conflict of interest and there was no external source of funding for the present study. None of the authors have any relevant financial relationship(s) with a commercial interest.

Ethical approval

Research protocol was approved by the local Ethical Committee (2018/23) and in accordance with those of the World Medical Association and the Helsinki Declaration.

Informed consent

Informed consent was obtained from all individual participants included in the study.

Source of Funding

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Availability of Data and Materials

Not applicable.

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ԸՆՏԱՆՆԵԿԱՆ ՉՈՐՐՈՐԴ ՄՈՒԱՐՆԵՐ ԱՆՍԻՆԴՐՈՍ ՀԻՎԱՆԳՆԵՐԻ ՄՈՏ. ԱՆՍՈՎՈՐ ԴԵՊՔԻ ՆԿԱՐԱԳՐՈՒԹՅՈՒՆ

Լուրիմար դե Մոուրա Մորեյրա,^{1,2} Ռիկարդո Գրիլլո,³ Գեովա Կլեմենտինո դե Ալմեյդա,² Ռուբենս Գոնսալվես Տեյշեյրա²

- ¹ Բերանի և դիմաձնոտային վիրաբուժության բաժանմունք, Սանտա Կասա դե Կուրիտիբա հիվանդանոց, Կուրիտիբա, Բրազիլիա
- ² Բերանի և դիմաձնոտային վիրաբուժության բաժին, Սան Լեոպոլդո Մանդիչի ֆակուլտետ, Կամպինաս, Բրազիլիա
- ³ Բերանի և դիմաձնոտային վիրաբուժության բաժին, Պլանալտոյի կենտրոնական ֆակուլտետ, Պլանալտո, Բրազիլիա

Ամփոփում

Նպատակ. Այս աշխատանքը նպատակ ունի զեկուցել չորրորդ մոյարի արտասովոր դեպքի մասին նույն ընտանիքից երեք հիվանդների մոտ:

Դեպքի հաշվետվություն. հիվանդը ենթարկվել է երրորդ և չորրորդ մոյարի հեռացման՝ քիչ հիվանդացությամբ: Զննարկվեցին մի քանի կարևոր ասպեկտներ, մասնավորապես՝ պիեզովիրաբուժության կիրառումը: Զննարկվեցին դիստոմոլարների և պարամոլարների դասակարգման և համաճարակաբանության կարևոր առանձնահատկությունները: Հեղինակները կարծում են, որ սա ընտանեկան չորրորդ մոյարների առաջին զեկույցն է:

Եզրակացություն. Թեև համարվում է հազվագյուտ վիճակ, չորրորդ մոյարները կարող են դիտարկվել որպես անսովոր կամ հազվադեպ վիճակ: Հազվադեպ տերմինը չի համապատասխանում այս իրավիճակին,

և հեղինակները քննարկում են այն: Պիեզոփիրարուժությունը շատ վնասակար է լայնածավալ օստեոտոմիաներում երրորդ և/կամ չորրորդ մոլյարները հեռացնելու համար:

СЕМЕЙНЫЕ ЧЕТВЕРТЫЕ МОЛЯРЫ У НЕСИНДРОМНЫХ ПАЦИЕНТОВ: ОПИСАНИЕ НЕОБЫЧНОГО СЛУЧАЯ

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Абстракт

Цель: Целью данной работы является сообщение о необычном случае появления четвертых моляров у трех пациентов из одной семьи.

История болезни: Пациенту удалили третьи и четвертые моляры с небольшими осложнениями. Обсуждались некоторые важные аспекты, в частности использование пьезохирургии. Обсуждены важные особенности классификации и эпидемиологии дистомоляров и парамоляров. Авторы полагают, что это первое сообщение о семейных четвертых молярах.

Выводы: Несмотря на то, что четвертые моляры считаются редким заболеванием, их можно рассматривать как необычное или редкое заболевание. Термин «редкий» не подходит для данной ситуации, и авторы спорят по этому поводу. Пьезохирургия очень вредна при обширных остеотомиях по удалению третьих и/или четвертых моляров.