

MESIODENS BILATERALLY TO MIDLINE: A CASE REPORT

MESIODENTES BILATERALMENTE A LINHA MÉDIA: RELATO DE CASO

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ABSTRACT

Mesiodens is the more frequent supernumerary tooth, located between the upper central incisors and can be found in deciduous or permanent dentition, with greater predominance for males, which can cause functional, aesthetic and psychological changes. Aiming to report a clinical case that presents two mesiodens bilaterally in the anterior maxillary region, causing impaction of the permanent upper central incisors. A non-syndromic, male, 5-year-old patient sought care accompanied by his legally responsible at the Pediatric Dentistry Clinic of the Universidade do Grande Rio, referred by the private clinic because it was believed that the procedure could only be performed with the use of conscious sedation. The treatment plan was carried out through imaging exams and clinical evaluation. It is concluded that a good evaluation, diagnosis, and adequate planning are fundamental in therapeutics. Therefore, they have allowed the eruption of the central incisors, contributing to a better quality of life and self-esteem.

Keywords: Bullying. Mixed dentition. Supernumerary tooth.

RESUMO

O mesiodente é um dente supranumerário mais frequente e localiza-se entre os incisivos centrais superiores, podendo ser encontrado na dentição decídua ou permanente. Há um predomínio maior entre o gênero masculino, podendo causar alterações funcionais, estéticas e psicológicas. Neste trabalho, tem-se como objetivo relatar um caso clínico que apresenta dois mesiodentes bilateralmente na região anterior da maxila, causando impacção dos incisivos centrais superiores permanente. O paciente, do gênero masculino, com 5 anos de idade, não síndrômico, procurou o atendimento em companhia da responsável, na Clínica de Odontopediatria da Universidade do Grande Rio, encaminhado pela clínica particular pois acreditava-se que o procedimento só poderia ser realizado com o uso de sedação consciente. O plano de tratamento foi realizado através de exames de imagens e avaliação clínica. Conclui-se que uma boa avaliação, diagnóstico e planejamento adequado são fundamentais na terapêutica. Desta forma, permitiram a erupção dos incisivos centrais, contribuindo para melhor qualidade de vida e autoestima.

Palavras-chave: Bullying. Dente supranumerário. Dentição mista.

INTRODUCTION

According to Soares *et al.* (2016), supernumerary teeth are an anomaly of number, in which there is formation of one or more element in the dentition that can have rudimentary, conoid, tubercle shapes and are classified according to location in mesiodens, parapremolar, paramolar and distomolar (SHARMA; SINGH, 2012). It can be single or multiple, and can cause disturbance in the normal eruption of permanent teeth (PRIMOSH, 1981); in addition to other complications such as delayed eruption, permanent impaction, diastema between central incisors, cystic lesions, ectopic eruption, permanent teeth root resorption (ASAUMI *et al.*, 2004; SHARMA; SINGH, 2012); tooth crowding, gingival inflammation, periodontal abscess (ARX, 1992); displacement, tooth rotation and pulp necrosis (WANG; FAN, 2011)

In addition to anamnesis, physical examination, panoramic radiography was the complementary exam used for diagnosis. This enables the identification and recognition of the position, number, shape and complications that change the successors (SOARES, 2016).

Often, the diagnosis of supernumerary teeth is performed after clinical and radiographic examinations routinely, besides the association with the eruption of permanent teeth disorder (REIS *et al.*, 2014).

In agreement with Cal Neto and Cunha (2002), mesiodens teeth have a predilection for the maxilla in 90 - 98% cases, predominantly affecting males and permanent dentition (NEVILLE *et al.*, 2009; BAHADURE *et al.*, 2012).

It is necessary to be careful when indicating surgical removal of supernumerary teeth, avoiding disturbances in the formation of permanent dentition (ALMEIDA *et al.*, 2010). Nevertheless, this indication can only be indicated when there are oral health disorders, after complementing the dentition and preserving the roots of permanent teeth (REIS *et al.*, 2014). It should also be verified the absence of pathologies and when there is no planned orthodontic treatment (PETERSON *et al.*, 2000).

In this context, the aim of this study was to report a clinical case that presents two mesiodents in the anterior region of the maxilla, which were the etiological factor of impaction of the upper permanent central incisors, surgical removal and monitoring the physiological eruption of permanent teeth.

CASE REPORT

The patient, a 5-year-old boy, was taken by his guardian, to the Pediatric Dentistry Clinic, University of Grande Rio, referred by the private clinic because it was believed that the procedure could only be performed with the use of conscious sedation.

The main complaint reported was aesthetic, caused by the presence of two supernumerary conoid teeth in the anterior maxillary region, in the midline, occupying the space of the upper central incisors. There was no mention of discomfort or pain, only bullying, being nicknamed by friends as “shark”.

The guardian reported that there is no history of anomalies in numbers or shape among family members and that there are no noteworthy systemic changes.

During the clinical examination, the mixed dentition phase was identified with the presence of two conical-shaped teeth in the space of the maxillary central incisors erupted at the buccal surface, featuring two mesiodens (Figure 1 and 2), carious lesions in the posterior teeth, root debris, posterior crossbite and dental fluorosis.

During the consultation, the legal guardian provided a recent panoramic x-ray (Figure 3), periapical x-ray taken during the consultation (Figure 4) and a photograph of the 3-year-old patient, which showed the presence of deciduous teeth 51 and 61 (Figure 5). After exfoliation (51 and 61), the mesiodens erupted, however, the legal guardian did not know at what age teeth fell off, but that they were present at the age of 4 years.

Figure 1 - Supernumerary teeth - mesiodens



Source: authors.

Figure 2 - Supernumerary teeth – palatal view



Source: authors.

Figure 3 - Panoramic radiography



Source: authors.

Therefore, it was planned to adapt the environment and perform the extraction of supernumerary without the use of conscious sedation.

Prior to the extraction, the legal guardian responsible requested the postponement of the procedure, as the patient would be part of a family social commitment. Reanatomization of conoid elements was suggested and performed, using a celluloid matrix, improving the patient's aesthetics/self-esteem (Figure 6 and 7). In addition, the guardian and the child were informed that, after the event, extraction would be performed to allow the eruption of the maxillary central incisors.

Figure 4 - Initial periapical radiograph



Source: authors.

Figure 5 - Patient with 3 years old with the presence of deciduous teeth 51 and 61



Source: authors.

Figure 6 - Mesiodens restoration with celluloid matrix



Source: authors.

Figure 7 - Supernumerary teeth provisionally restored



Source: authors.

After the patient returned, the supernumerary teeth were surgically removed (Figure 8).

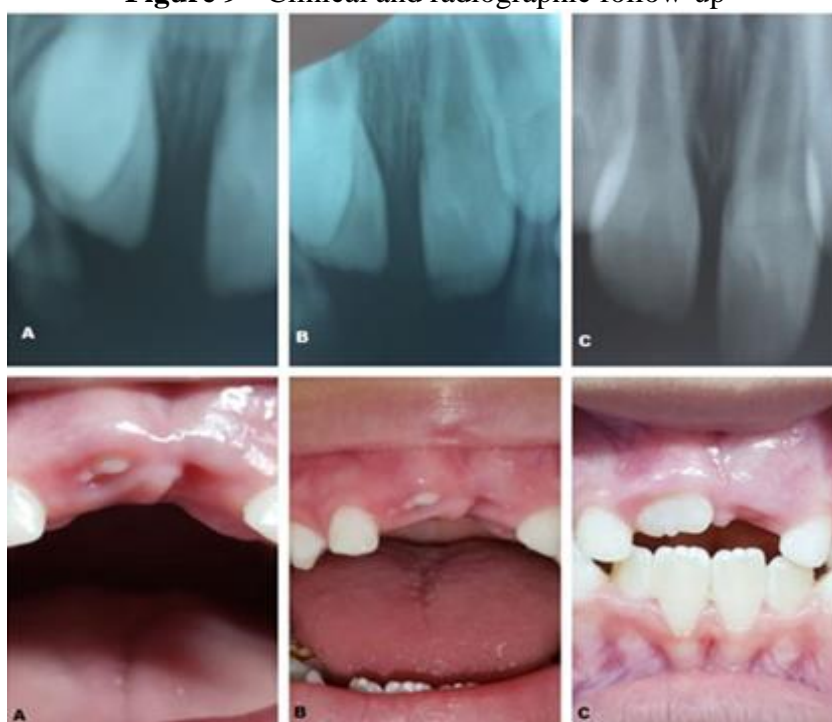
In the following consultations, the restorative/preventive treatment and clinical and radiographic follow-up of the eruption of permanent central incisors were completed (Figure 9). Despite the extractions, there was an improvement in the patient's self-esteem.

Figure 8 - Photo and radiography after one week of supernumerary extraction



Source: authors.

Figure 9 - Clinical and radiographic follow-up



Notes: A. Clinical and radiographic appearance two weeks after extraction. B. Clinical and radiographic appearance one month after extraction. C. Clinical and radiographic appearance after 3 months of follow-up.

Source: authors.

After 4 months of follow-up, the need for extraction of tooth 62 was verified, because, due to intraosseous position of element 21, making its eruption (Figure 9), clinical and radiographic follow-up difficult (Figure 10, 11, 12 and 13).

The patient returns every 3 months for follow-up, and the need for orthodontic intervention is confirmed, which was not initiated for financial reasons.

Figure 10 - Images of the right (A), front (B), left (C) and occlusal (D) views after 6 months



Source: authors.

Figure 11 - Periapical radiograph of teeth 11 and 21



Source: authors.

Figure 12 - Final photo after 9 months



Source: authors.

Figure 13 - Final periapical radiograph after 9 months



Source: authors.

DISCUSSION

The prevalence of dental anomalies in number between populations, continents and genders varies widely. Thus, the prevalence of mesiodens in some studies ranges from 1.5% to 2.8% (COELHO *et al.*, 2011; LARA *et al.*, 2013; TETAY-SALGADO *et al.*, 2021).

According to Gunduz *et al.* (2008) and Hyum *et al.* (2009), with regard to mesiodens, it is more frequently presented, single or multiple, similar to the reported study, which presents two mesiodens bilaterally to midline.

According to studies by Guedes-Pinto (1997) and Neville *et al.* (2009), the etiology of supernumerary teeth would be the overactivity of dental lamina, with the mesiodens having the highest incidence (COELHO *et al.*, 2011; SHARMA; SINGH, 2012). However, they are associated with patients who have hereditary diseases or syndromes, and should be carefully evaluated by an appropriate medical service to rule out the presence of related syndromes (SILVA; PEREIRA; JÚNIOR, 2005). In the present report, there was no associated syndrome.

According to Gunduz *et al.* (2008), Bahadure *et al.* (2012) and Sharma and Singh (2012), the male gender may be the most affected by the supernumerary or equal between genders (COELHO *et al.*, 2011).

The surgical indication for younger patients would bring fewer complications and deviation of effects or development of cysts in neighboring teeth (ARX, 1992). Nevertheless, there would be risks in the removal and preservation of the element that could affect the child's teeth, thus justifying early detection and the importance of conducting surgical planning (PRIMOSH, 1981). Thus, in this report, surgical removal of supernumeraries was chosen, followed by referral for orthodontic treatment, surgical removal is the most used, interrupting existing pathological processes or future complications (NEVILLE *et al.*, 2009).

Another important aspect to be mentioned is that, despite all the complications involving mesiodens, the child had psychological and social issues related to conoid teeth, being called by his friends a “shark”. Regarding bullying, the difference between him and his friends was questioned, confirming the assertion that there is a great aesthetic, functional and social interference of the patient with the presence of dental anomalies (COSTA *et al.*, 2009). Therefore, the child personality is developed, tending to suffer more with the appearance of dental anomalies (VALARELLI *et al.*, 2012). Children in Nigeria who were bullied, did not like going to school very much, which could affect their school performance (SKIKAODI *et al.*, 2017).

The presence of occlusal characteristics and anterior spacing contributes to the worsening of the child quality of life (SANDENBERG *et al.*, 2013). However, it is believed that aesthetic correction tends to generate benefits in the child psychosocial well-being, restoring self-esteem (DUTRA *et al.*, 2018; COSTA *et al.*, 2019).

During the treatment, the guardian requested the postponement of the extraction of supernumerary teeth, as the child would participate in a family social event. The reanatomization of supernumerary conoids with the celluloid matrix was suggested and performed, which contributed to the improvement of the patient behavior and self-esteem. This was observed by the guardian and family members who reported that the patient was happier and more communicative, in addition to smiling for photographs (COSTA *et al.*, 2009).

It is important to note that the preparation of the patient in the pediatric dentistry clinic is extremely important, both for simple and more complex procedures. For that, conditioning techniques were used based on “say-show-do”, among others. And, in this way, the child was “prepared” to face the surgical procedures, making him less anxious and more cooperative, which resulted in a successful planned surgery, with no need for conscious sedation.

Therefore, early detection and intervention can alleviate complications such as delayed eruption, permanent impaction, diastema between central incisors, cystic lesions, ectopic eruption, root resorption of permanent teeth, crowding, gingival inflammation, periodontal abscess,

displacement, dental rotation and pulp necrosis (ARX, 1992; ASAUMI *et al.*, 2004; WANG; FAN, 2011; SHARMA; SINGH, 2012).

FINAL CONSIDERATIONS

In the present study, two supernumerary conoids were present along the vestibular surface, in the midline of the maxilla, in a male patient, causing retention of permanent teeth due to lack of space.

Mesiodens was clinically identified and the panoramic radiography helped in the diagnosis of adjacent structures, being justifiable the removal of supernumerary teeth, as it caused retention of the permanent maxillary central incisors, in addition to bullying.

Given the above, it can be concluded that a good assessment, diagnosis and adequate planning are essential in therapeutics. Thus, these procedures allowed the eruption of the central incisors, contributing to a better quality of life and self-esteem for the patient.

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