



Supernumerary teeth in primary dentition associated to palatal polyps. Case report

Dientes supernumerarios en dentición primaria asociados a pólipos palatinos. Reporte de caso

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ABSTRACT

Polyyps are rare in children. The present article reports the clinical case of a 14 month old male patient brought for treatment to the Pedodontics Clinic of the Graduate School, National School of Dentistry National University of Mexico. He presented two palatal fibro-epithelial polyyps, located at both sides of the incisive papilla. 10 days after surgical excision, a supernumerary tooth erupted in the palate. 25 days later, eruption of a second supernumerary tooth was observed. Both teeth were extracted. Histological diagnosis of palatal lesions was giant fibroblast fibroma. Nevertheless, no histological evidence was found to show possible relationship between presence of palatal polyyps and supernumerary teeth.

Key words: Palatal polyyps, supernumerary teeth, giant fibroblast fibroma.

Palabras clave: Pólipos palatinos, dientes supernumerarios, fibroma de fibroblastos gigantes.

RESUMEN

Los pólipos son poco frecuentes en niños. En este artículo se presenta un caso clínico de un niño de un año dos meses que acude a la Clínica de Odontopediatría de la DEPeI UNAM con dos pólipos fibroepiteliales palatinos ubicados a ambos lados de la papila incisiva, 10 días posteriores a la excisión quirúrgica se observó la erupción de un diente supernumerario en el paladar, y 25 días después se observó la erupción de un segundo diente supernumerario. Ambos dientes fueron extraídos. El diagnóstico histológico de las lesiones en el paladar fue: fibroma de fibroblastos gigantes; sin embargo, no se encontró evidencia histológica que mostrara alguna posible relación entre la presencia de los pólipos palatinos y los dientes supernumerarios.

INTRODUCTION

Fibro-epithelial polyyps are described as a growth of the soft tissues, with pedunculated base. They are infrequent in children.¹

Fibrous lesions are relatively common. They are mainly found in the tongue, cheeks palate and gums. They are normally caused by a chronic, mechanic irritation or inflammation. In children, most intra-oral fibrous lesions are reported as epulis.²

While fibrous lesions are common in the mouth, palatal polyyps are rare in children.³ In 1999, Tornizawa et al reported three cases of palatal polyyps in children. These cases were diagnosed as fibro-epithelial hyperplasia; they also presented impacted supernumerary teeth. Nevertheless, the histopathological study did not reveal any trace of odontogenic tissue; therefore, histological relationship between hyperplasia and supernumerary tooth could not be confirmed.⁴

Location of supernumerary teeth can be found in all sites of the dental arch, with predilection for the pre-maxillary area.⁵ Mesiodens would be the most common, located in the upper central incisor region.⁶

Many theories have been described with respect to their etiology; among them we can mention dental lamina hyperactivity influenced by a genetic pattern.⁷

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We must also consider alterations sustained during epithelium and mesenchyme interaction and affect tooth development. Nevertheless, this situation is less likely in primary dentition due to the environmental balance before birth.⁸

Most mesiodens do not erupt, and when they do, the most common location is in the pre-maxillary area, next to the central incisor.⁹

CASE REPORT

A 14 month old male patient was brought to the Graduate School of the National School of Dentistry, National University of Mexico seeking assessment and treatment for a volume increase observed in the area next to the incisive papilla.



Figure 1. Intraoral view of polyp.

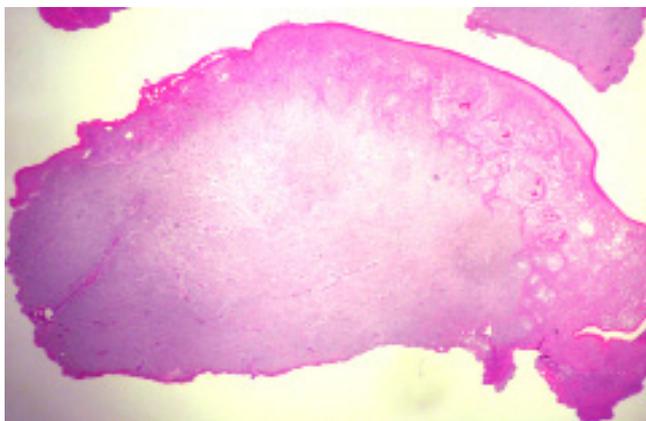


Figure 2. Photomicrography showing extracted polyp.

The mother informed that no lesion could be observed at birth. With the passing of time she initially observed small tumefactions in the area precisely adjacent to the incisive papilla. These swellings grew larger, hindering thus proper feeding.

Inspection revealed two areas of increased volume in a contra-lateral location with respect to the incisive papilla. The left area lesion was noticeably larger than the right one. It presented a pedunculated base, firm consistency and pink coloring, slightly more intense than the adjacent mucosa (*Figure 1*). Emitted presumptive diagnosis was fibrous hyperplasia.

Surgical excision was conducted under local anesthesia. The left lesion measured 11 mm diameter, the right one measured 4 mm. The specimen was analyzed at the Pathology Department, Findings were the followings: well vascularized, dense, fibrous connective tissue, hyalinized based mucopolysaccharides, as well as mild, chronic, diffuse inflammatory infiltrate as well as recent hemorrhage. The lesion was lined with hyperkeratinized stratified squamous epithelium with acanthosis. No odontogenic tissues were found (*Figure 2*). Histopathological diagnosis emitted was giant fibroblast fibroma (*Figure 3*).

Ten days later, when the patient arrived for a revision, a bulge was observed on the right side to the incisive papilla, just underneath the previously removed smaller-sized lesion. Radiographic assessment revealed presence of two supernumerary teeth, in a contra-lateral location with respect to the midline (*Figures 4 and 5*).

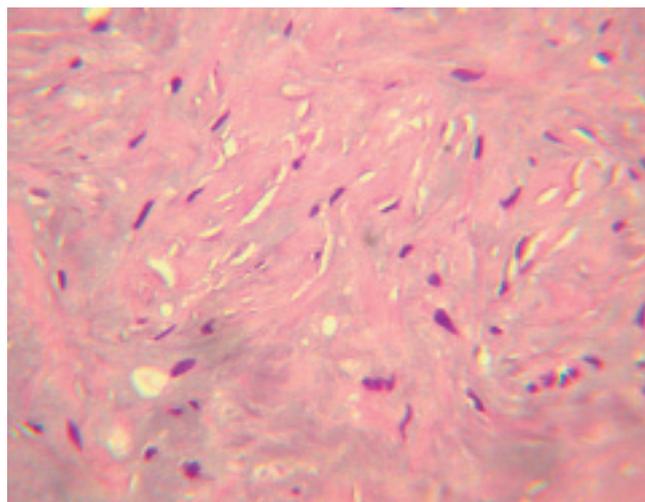


Figure 3. Photomicrography showing larger sized fibroblasts as well as collagen fibers.



Figure 4. Clinical view 10 days after polyp excision.



Figure 7. Indirect view of same tooth.



Figure 5. Periapical X ray showing presence of supernumerary teeth.



Figure 8. Clinical view 15 days after left side supernumerary tooth extraction.



Figure 6. Clinical view 15 days after right side supernumerary tooth extraction.



Figure 9. Final X ray, showing absence of any supernumerary teeth.

The erupted supernumerary tooth presented severe mobility, it was thus decided to extract it. Extraction was performed with the help of local anesthesia points. At that moment in time it was decided to keep the left side under observation.

The patient attended the clinic 15 days later for revision. At that point it was observed that the left supernumerary tooth had erupted. It presented large amounts of soft tissue at its base as well as severe mobility. It was then decided to extract it under local anesthesia (Figures 6 and 7).

The specimen of connective tissue located around the tooth was sent to the Pathology Department to be assessed. No odontogenic tissue evidence was found.

At a later revision undertaken 15 days later, total repair of the palatal epithelium was observed as well as absence of any supernumerary teeth. For all the aforementioned reasons, the patient was discharged (Figures 8 and 9).

DISCUSSION

Upon reviewing scientific literature we found reports of supernumerary teeth located in uncommon locations. Ectopic teeth have been reported to be found in the mandibular ramus,^{10,11} in the coronoid process,^{12,13} in the condyle,¹⁴ in the lower rim of the mandible,¹⁵ in the chin,¹⁶ in the infratemporal fossa,¹⁷ in the maxillary tuberosity,¹⁸ in the nasal cavity¹⁹ and the maxillary sinus.²⁰

All the aforementioned teeth were found partially or totally impacted in the bone. Some authors have reported cases where teeth were totally included in soft tissue. Rion²¹ reported two supernumerary teeth located at the upper lip vermilion border. Carver²² reported a canine erupting through the eye rim. Gans²³ described a mobile mass located in the palate near a second primary molar. Dieckman²⁴ described a supernumerary tooth located within the palatal tissue, next to the incisive papilla.

Supernumerary teeth are more frequent in permanent than in primary dentition. Most of them appear in the upper lateral incisive area, or in the form of a mesiodens.²⁵

The case presented in this article received clinical diagnosis of palatal polyp as opposed to epulis. This was due to the fact that lesions were located next to the incisive papilla.

Polyps and epulis are generally caused by chronic irritation triggered by habits such as finger sucking, bottle or pacifier. Our patient nevertheless did not present any of these factors which might have caused the development of the lesion.²⁶

Since the histological sample exhibited a pedunculated polyp with very small base, it was thought the lesion might have a hamartomatous origin, since lesions triggered by chronic irritation normally present a much larger peduncle.²⁷

Two other cases were equally reported in Japan. The cases presented congenital epulii adjoining supernumerary teeth. It was thought that the tooth germ induced the hamartoma. Nevertheless, no odontogenic tissues were found surrounding the connective tissue.^{28,29}

In the present case, it was considered that supernumerary teeth impacted in the palate could have influenced the polyps growth. It was equally considered that the presence of this highly fibrous tissue prevented eruption of those teeth. Upon removal of the tissue, teeth recovered their eruptive potential.

CONCLUSIONS

In the present study, no histological evidence proving presence of odontogenic tissue in polyps was found. Therefore, direct relationship between the aforementioned and supernumerary teeth could be proven. Nevertheless, the relationship among these teeth due to the fact that had developed in precisely the same location could not be ignored.

REFERENCES

1. Neville, BW, Damm DD, Allen CM, Bouquet JE. *Oral & Maxillofacial Pathology*. 3rd edition. New York: WB Saunders Company; 2009: 438-443.
2. Marx R, Stern D. *Oral and Maxillofacial Pathology*. Miami: Quintessence Publishing; 2003; 25-26, 255, 395-397.
3. Noguchi M, Tomizawa M, Suzuki M, Noda T. Impacted supernumerary tooth developed under palatal polyp. *Inter J of Paed Dent*. 2002; 12: 281-285.
4. Tomizawa M, Kohno M, Noda T, Suzuki M. Three cases of palatal polyps in infants. *Inter J of Paed Dent*. 1999; 9: 213-217.
5. Primosch R. Anterior supernumerary teeth-assessment and surgical intervention in children. *Pedia Dent*. 1981; 3: 204-215.
6. Rajab LD, Hamdan MAM. Supernumerary teeth: review of the literature and survey of 152 cases. *Inter J of Paed Dent*. 2002; 12: 244-254.
7. Mitchell L. Supernumerary teeth. *Dental Update*. 1989; 16: 65-69.
8. Berkovitz BKB, Holland GR, Moxham BJ. *Oral Anatomy, History and Embryology*. St Louis, MO: Mosby; 2002; 302.
9. Bruce KW. Supernumerary maxillary central incisors. *Chron Omaha Dist Dent Soc*. 1960; 23: 178-180.
10. Zernov MW, Paris MD. Misplaced third molar in the region of the condyle erupting through the cheek. *Br Dent*. 1949; 87: 295.
11. Adbin BM. Eruption of a third molar through the skin. *Quintess Int*. 1970; 1: 17-18.
12. Muller EJ. Tooth in coronoid process. *Oral Surg Oral Med Oral Pathol*. 1983; 55 (3): 327.
13. Stuarck W, Keim RP. Bilateral molar impactions in coronoids process with unilateral molar impaction in neck of left condyle. *Oral Surg*. 1958; 11: 707-709.

14. Tümer C, Eset AE, Atabek A. Ectopic impacted mandibular third molar in the subcondylar region associated with a dentigerous cyst: a case report. *Quintess Int.* 2002; 33 (3): 231-233.
15. Stones H. *Oral and Dental Diseases*. 5 ed. Edinburgh: E. & S. Livingstone; 1966; 144-145, 148-149.
16. Gadalla GH. Mandibular incisor and canine ectopia. A case of two teeth erupted in the chin. *Br Dent J.* 1987; 163 (7): 236.
17. Geren TJ. A clinical report of two badly misplaced upper third molars. *Dent Cos.* 1929; 71: 1198-1201.
18. Thoma KH. *Clinical pathology of the jaws*. London: Bailliere & Company; 1934; 285-286.
19. Lee JH. A nasal tooth associated with septal perforation: a rare occurrence. *Eur Arch Otorhinolaryngol.* 2006; 263 (11):1055-6. Epub 2006 Jun 28.
20. Büyükkurt MC, Tozoglu S, Aras MH, Yolcu U. Ectopic eruption of a maxillary third molar tooth in the maxillary sinus: a case report. *J Contemp Dent Pract.* 2005; 6 (3): 104-110.
21. Rion C. Tooth in upper lip: report of case. *J Am Dent Assoc.* 1930; 17: 2295.
22. Carver E. Irregular eruption. *Br Dent J.* 1887; 8: 757.
23. Gans BJ. Ectopic tooth: report of a case. *J Oral Surg.* 1962; 20: 435-437.
24. Diekmann SL, Cohen DM, Gutz DP. Ectopic soft-tissue mesiodens. *Oral Surg Oral Med Oral Pathol.* 1982; 53: 391-394.
25. Mitchell L. Supernumerary teeth. *Dental Update.* 1989; 16: 65-69.
26. Uozato I, Sato K, Nagayama M, Fujita A, Komori A. Congenital epulis: report of a case. *Jap J of Oral and Max Surg.* 1987; 33: 1634-1639.
27. Seki A, Maeno H, Tomizawa M, Suzuki M, Noda T. Congenital epulis, so-called leiomyomatous hamartoma: a case report. *Jap J of Pediat Dent.* 1991; 29: 854-861.
28. Tanaka H, Hotsu K, Murakami M, Ohno K. Two cases of the congenital epulides. *Jap J of Pediat Dent.* 1984; 22: 560-570.
29. Saitoh M, Higuchi Y, Kouzuki H, Mitsuyasu T, Ohishi M. A case of congenital epulis associated with an impacted supernumerary tooth germ. *Jap J of Oral and Max Surg.* 2000; 46: 313-315.

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