Impacted Canine and Premolar in relation to Odontoma: A Case Report

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ABSTRACT

An odontoma is defined as a benign odontogenic tumor containing enamel, dentin as well as cementum. Odontomas are regarded as benign tumors and for this reason the treatment is simple removal. The odontomas often cause various disturbances in the eruption and position of the teeth. Therefore, the most frequent feature of an odontoma is retention (impaction) of the permanent tooth, perhaps with persistence of the primary tooth. The clinical features and management of odontoma with surgical removal and post-operative follow up is discussed in this following case report.

KEYWORDS: Impacted Canine, Premolar, Odontoma

INTRODUCTION

An odontoma is defined as a benign odontogenic tumor containing enamel, dentin as well as cementum. Odontomas are regarded as benign tumors and for this reason the treatment is simple removal.¹ The odontomas often cause various disturbances in the eruption and position of the teeth. Therefore, the most frequent feature of odontoma is retention (impaction) of the permanent tooth, perhaps with persistence of the primary tooth. Less frequently, the diagnosis is made on account of a symptomless swelling, displacement of already erupted teeth or accidental radiographic findings. Apart from the retention, the odontomas seldom damage neighboring teeth; impacted teeth in connection with odontomas may be left to erupt after the odontoma has been removed. The present case report was carried out with the purpose of analyzing the possibility for eruption impacted teeth in relation to odontomas.² Over-retained deciduous teeth were extracted and odontoma was located and removed surgically and routine follow up was carried out.

CASE REPORT

In this case report a 18 years old female was referred to our department of oral and maxillofacial surgery with pain and swelling in right palatal mucosa associated with impacted canine and premolar. The patient had no significant medical history and had not reported oral trauma or infections in past. Intraoral examination showed the presence of the primary right canine over the physiological period of exfoliation, which meant no correspondence between chronological and dental ages (Figures 1).

A radiographic examination (panoramic X-ray) showed multiple radiopaque structures compatible with a provisional diagnosis of compound odontoma and the unerupted right canine in mesial standing. The extraction of deciduous canine was performed (Figure 2). Surgery was performed under local anesthesia (2% lignocaine with 1 : 100,000 epinephrine). A mucoperiosteal flap was raised and bone was removed on vestibular side using a low-speed dental hand-drill with a tungsten carbide round bur until the crown of the permanent impacted canine was exposed (Figure 3).

The wound was carefully irrigated with physiological solution and cleaned with a sterile dressing; the flap was repositioned and sutured. (Figure 4,5).

The histological hard tissue examination confirmed the clinical and radiographic diagnosis of compound...
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The postoperative period was uneventful. Postoperative treatment consisted of amoxicillin and clavulanic acid 500 mg thrice a day and paracetamol (500mg thrice a day for 3 days, and then as needed), and chlorhexidine (CHX, 0.2%) mouthwash rinses and oral hygiene instruction were given for postoperative wound management. Patient was recalled on third and seventh postoperative day to evaluate for wound healing which was satisfactory and sutures were removed on the seventh day.

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DISCUSSION

The term “odontoma” was introduced by Paul Broca in 1867 to describe “tumors formed by the overgrowth of transitory or complete dental tissues.” Odontomas are intraosseous lesions mainly located in the anterior maxilla and anterior mandible, although lesions localized in gingival soft tissues have also been reported. The majority of odontomas are asymptomatic, although swelling, pain, suppuration, bony expansion, and displacement of teeth have been rarely observed. Their pathogenesis has been associated with a number of causes including trauma during primary dentition, hereditary anomalies such as Gardner’s syndrome, Hermann’s syndrome, and basal cell nervous syndrome, odontoblastic hyperactivity, or alterations of the genetic components responsible for controlling dental development. The development of the odontoma is commonly associated with eruption failure of permanent teeth, impaction, and delayed exfoliation of primary teeth. In this case, the presence of odontoma prevented the physiological eruption of permanent maxillary canine. In accordance with the literature, the patient had no pain but the lesion’s pathogenesis resulted unknown: there were no reported previous traumatic or infective episodes and medical history was negative.

The treatment of choice for compound odontomas is surgical removal, followed by histopathological analysis to confirm the diagnosis. According to the literature, the optimal management of the impacted tooth should allow its conservation and repositioning in the arch. On the other hand, impacted teeth are frequently reported to be extracted simultaneously with the odontoma. In this case, the removal of odontoma was followed by the extraction of the deciduous canine. A hard tissue analysis was finally taken in order to confirm the odontoma’s diagnosis.

CONCLUSION

In conclusion, the presence of odontoma in association with the impacted canine needs an early diagnosis and a surgical removal treatment. A careful knowledge and an excellent evaluation are essentials to resolve adequately each clinical case. The adoption of a conservative surgical approach is advisable, in order to preserve the dental tissues and obtain optimal tissue healing. A histological evaluation is necessary to confirm the correct diagnosis of odontoma.

REFERENCES

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