Case Report

A 25-Year-Old Female with Unusually Large Complex Odontoma in Mandibular Molar Area Associated with Unerupted Tooth

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Received: November 15, 2018 Accepted: December 31, 2018
doi: https://doi.org/10.3329/jemc.v9i1.39907

Abstract

Odontomas are benign tumours of odontogenic origin consisting of different dental tissues. Usually they are tooth size or smaller, but occasionally complex variety can exhibit considerable growth. They are usually asymptomatic and often are discovered during routine radiograph. Morphologically odontoma can be classified as complex when present as irregular masses containing different types of dental tissues, or as compound if there is superficial anatomic similarity to even rudimentary teeth known as denticles. We report a case of large complex odontoma that causes pain, infection and facial asymmetry.

Key words*: Odontoma; Hamartoma; Odontogenic tumour; Denticles*

J Enam Med Col 2019; 9(1): 57−59

Introduction

Odontomas were first described by Paul Brocain in 1867. He used the term odontoma for all odontogenic tumours.[1] Odontomas are now considered as hamartoma (tooth-like malformation), not a true neoplasm as they comprise of both epithelial and mesenchymal components, having morphologically normal cells with defective structural organisation.[2,3] Histologically, odontomas are composed of different dental tissues, including enamel, dentine, cementum and in some cases pulp tissue.[4]

Odontoma have been associated with trauma during primary dentition as well as with inflammatory and infectious process, hereditary anomalies (Gardner's syndrome, Hermann's syndrome), odontoblastic hyperactivity and alteration in the genetic components responsible for controlling dental development.[5] Odontomas are characterised by slow and painless growth and may be associated with retention of primary tooth or delay in the eruption of primary and permanent tooth.[6]

Case report

A 25-year-old female patient came with the complaints of pain, swelling and discharging sinus in the left side of jaw for one month. She gave history of same problems about one year back. Swelling had been present for five years. On examination, there was a hard swelling on left angle of the mandible extraorally which was tender on palpation. There was facial asymmetry. Left submandibular lymph node was palpable. Intraorally, there was discharging sinus on left mandibular molar area. All molar teeth were missing and alveolar swelling was present. A panoramic radiograph was taken, which showed a well-circumscribed radio-opaque lesion surrounding an irregular radiolucent area on left body – angle of mandible. The radio-opacity was similar to dental hard tissue. There was an impacted tooth on the base of the lesion at lower border. Based on clinical and radiographic presentation a provisional diagnosis of complex odontoma was made. Surgical excision of the lesion with extraction of the impacted tooth was planned under general anaesthesia.

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With all aseptic precautions an intraoral crestal incision was made and meticulous flap elevation was done. Excision of the lesion was done by slicing it into pieces with bur and chisel. Extraction of impacted tooth was also done. Sharp bony spicules were nibbled. A bacitracin + neomycin soaked gauge was kept in situ and wound was kept open. After seven days the gauge was removed. Self-irrigation of the wound was done by the patient for a long time. The patient was followed-up at regular intervals.

Fig 1. Preoperative

Fig 2. After excision of tumour

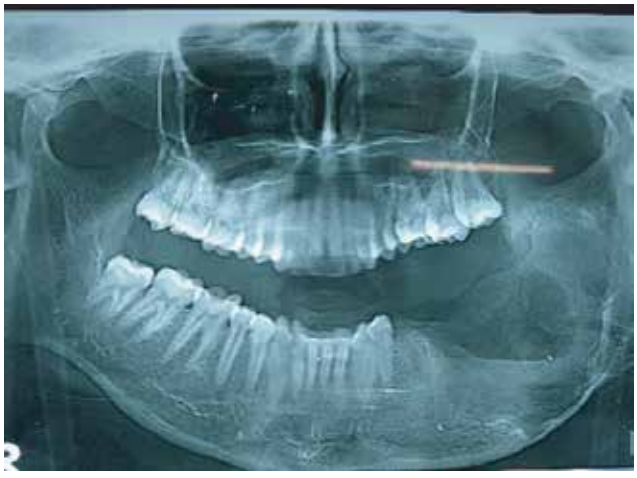

Fig 3. At two months follow-up

Fig 4. At three months follow-up

Discussion

Odontoma is the most common type of odontogenic tumour. Complex odontomas tend to occur in the posterior region of the jaw and compound odontomas are more in the anterior maxilla. Male and female are equally affected. The age at diagnosis is commonly in the second decade of life.[7]

Although odontoma may be discovered at any age, less than 10% are found in the patients over 40 years of age.[8] They are commonly asymptomatic. Clinical indicators of odontoma may include retention of deciduous tooth, non-eruption of permanent tooth, pain, expansion of cortical bone and tooth displacement, anaesthesia of lower lip and swelling of affected area.[6,9] In the present case, pain was the first symptom, probably due to secondary infection.

Eruption of an odontoma through the mucosa could also allow invasion of microorganism into the bone due to lack of adequate adhesion between bone and odontoma because of the absence of periodontal ligament.[4] Odontoma can be measured from a few millimeter to many centimeters in the greatest dimension, the largest found in the human body weighed 0.3 kg.[8]

Clinically, they can also be classified as intraosseous and extraosseous. Intraosseous tumours occur inside the bone and may erupt into oral cavity. Extraosseous or peripheral odnotoma occurs into the soft tissue covering tooth-bearing portion of jaw.[10]

The odontoma presents as a well-defined radio-opacity situated in bone, but with a density greater than bone and equal to or greater than that of a tooth. It contains foci of variable density. A radiolucent halo typically surrounded by a thin sclerotic line surround the radio-opacity. The radiolucent zone is the connective tissue capsule of a normal tooth follicle. The thin sclerotic line resembles the corticated border seen in a normal tooth crypt.[11]

In this case we presented a mature complex odontoma. Differential diagnoses are cementoblastoma, osteoid ostoma and fibroosseous lesion such as cemento ossifying fibroma. The mechanism of odontoma eruption appears to be different from tooth eruption because of the lack of periodontal ligament in odontoma. Therefore the force required to move the odontoma is not linked to the contractility of fibroblast, as in the case for the tooth. Although there is no root formation in odontoma, its increasing size may lead to the sequestration of the overlying bone and hence occlusal movement or eruption. Surgical removal of odontoma is indicated in the absence of any contraindication. Clinical and radiographic follow-up is prudent where surgical treatment is deferred.

Conclusion

The present case report is of an infected complex odontoma with an unerupted tooth. Such cases may confuse diagnosis during clinical examination. Radiographically, such odontomas may be mistaken for various other lesions. Treatment is needed to avoid fracture of angle of mandible and permanent prosthesis is done later.

References

1. Neville BW, Damm DD, Allen CM, Bouquot JF. Odontogenic cyst and tumours. In: Oral and maxillofacial pathology. 2nd edn. Philadelpha (PA): WB Saunders Company, 2002: 631–632.
2. Barnes L, Eveson JW, Reichart P, Sidransky D. World Health Organization classification of tumours. Pathology and genetics. Head and neck tumours. IARC, Lyon, France, 2005.
3. Cohen DM, Bhattacharyya I. Ameloblastic fibroma, ameloblastic fibro-odontoma and odontoma. Oral Maxillofac Surg Clin North Am 2004; 16(3): 375–384.
4. Serra-Serra G, Berini-Aytés L, Gay-Escoda C. Erupted odontoma: a report of three cases and review of the literature. Med Oral Pathol Oral Cir Buccal 2009; 14: E299–E303.
5. Iatrou I, Vardas E, Theologie-Lygidakis N, Leventis M. A retrospective analysis of the characteristics, treatment and follow up of 26 odontomas in Greek children. J Oral Sci 2010; 52: 439–447.
6. Tuzum MS. Orofacial pain associated with an infected complex odontoma (case report). Aust Dent J 1990; 35(4): 352–354.
7. Soluk TM, Pehlivan S, Olgac V, Aksakalli N. Clinical and histopathological investigation of odontomas: review of the literature and presentation of 160 cases. Journal of Oral and Maxillofacial Surgery 2012; 70(6): 1358–1361.
8. An SY, An CH, Choi KS. Odontoma: a retrospective study of 73 cases. Imaging Sci Dent 2012; 42: 77–81.
9. Junquera L, De Vincente JC, Roig P, Olay S, Rodriguez-Recio O. Intraosseous odontoma erupted into oral cavity: an unusual pathology. Med Oral Patol Oral Cir Bucal 2005; 10(3): 248–251.
10. Guinta JL, Kaplan MA. Peripheral soft tissue odontomas. Oral Surg Oral Med Oral Pathol 1990; 69(3): 406–411.
11. Worth HM. Odontomas and cyst of the jaw. In: Principles and practice of oral radiographic interpretation. Chicago: Year Book Medical, 1963: 420–424.