



CASE REPORT

Management of Complex Odontoma in Posterior Maxilla: Case Report

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Abstract

Objective

Odontomas are hamartomas which consist of different types of dental tissue (enamel, cementum, dentin). They are slow-growing benign tumors with unknown etiology. Thus, they are detected in routine radiographs and have non-aggressive behaviour.

Cases

A 13-year-old girl was referred to our department for the evaluation of well-defined radiopaque mass associated with impacted upper right second molar adjacent to maxillary sinus. After clinical and radiological examination, surgery was performed. The mass was removed with associated tooth. Removed mass was sent to histopathological examination and reported as complex odontoma.

Conclusion

Odontomas are usually asymptomatic and are detected during routine radiographic examinations. The treatment of choice is surgical removal, usually performed by osteotomies to expose the tumor. However, close follow up and frequent control is important for the successful treatment.

Keywords: Odontoma, impacted tooth, radiopaque mass

Introduction

Odontomas are developmental disorders of dental organs and may relate to permanent tooth as well as retained deciduous tooth. Odontomas can cause impaction, malformation, aplasia and devitalization of adjacent teeth. They are slow growing, benign mixed odontojenic non-aggressive tumors; mostly show no symptoms without exposed the oral cavity^{1,2}. Their etiology is not known exactly although trauma, genetic mutation in the tooth germ and infection have been asserted^{3,4}. Odontomas have no sex predilection. They can come about any age but highest prevalence is in first twenty years of the life⁵.

WHO 2017⁵, has divided odontomas into two categories as compound and complex type. The radiopaque mass in compound odontoma composed of many tooth-like component, on the other hand complex odontoma composed of disorganized dental tissue⁵. Compound odontoma mostly occur in the anterior upper jaw, whereas complex odontoma are found often in the posterior lower jaw⁶. We document a case report of female patient with complex odontoma.

Case Report

A 13-year-old apparently healthy female patient was referred to our department with the radiopaque lesion over the upper right second molar tooth. Patient had no complaint about such lesion. It is not exposed to oral cavity. Surrounding mucosa was not ulcerated and had no history of infection. Both intraoral examination and extraoral examination was normal. To define the exact position of the lesion, and its proximity to the nearby anatomical vital structures, Cone Beam Computer Tomography (CBCT) was requested. CBCT revealed dense, disorganized, radiopaque mass limited by corticated border, positioned distal to upper first right molar tooth and over the impacted upper right second molar (Figure 1). Taking into considering these findings, preliminary diagnosis was complex odontoma.

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Figure 1. Disorganized radiopaque mass (blue arrow) and proximity of tooth for the sinus floor (red arrow)

Surgical consent was taken from the patient's parent. After local anesthesia was performed, surgical access to the lesion was accomplished via the intraoral vestibular sulcular route. Buccal bone guttering was performed to reach the lesion. The lesion was removed. The associated impacted tooth was extracted (Figure 2).



Figure 2. Removed lesion (red arrow) and tooth (yellow arrow)

Orthodontic traction was not the treatment of choice for associated tooth due to both its mobility and its absence of occlusion. The surgical region was curetted and irrigated with saline. The flap was replaced with 4-0 cutting vicryl suture. The specimen showed a yellowish calcified mass with an irregular surface also showing differences from normal tooth structure. The retrieved specimen was sent for histopathological examination. It was reported as a complex odontoma. The postoperative period was uneventful. Recurrence was not detected during six months follow-up (Figure 3).



Figure 3. Six months follow up

Discussion

Odontomas are the most prevalent developmental mixed odontogenic tumors. They are often discovered as radiographic findings. Although odontomas develop in the tooth-bearing area, compound odontoma is mostly located in anterior upper jaw, whereas complex odontoma occurs into posterior lower jaw⁵.

Treatment of the odontomas is surgical therapy. After the enucleation of the odontoma, the recurrence rate is very low. Evaluation of the root development of the associated impacted tooth is important for either orthodontic traction or extraction. Because of both mobility of the impacted tooth and the absence of its occlusion, we decided to the extraction of the tooth. The unique clinical and radiographic findings of odontoma help clinicians predict an accurate diagnosis. If the odontoma is discovered earlier, the surgical burden both for clinician and patient decreases dramatically 8formerly named ameloblastic fibro-odontoma (AFO).

Acknowledgement

Source of Finance

There is no financial source

Conflict of Interest

There is no conflict of interest between authors and all authors contributed to study.

Written consent was obtained from the patient's parent for publication.

Authorship of Contributions

All authors contributed to study.

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