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Case Report

Impacted Odontoma- A Case Report

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Abstract

Odontomas are benign tumours of odontogenic origin, composed of enamel, dentin, cementum, and pulpal components. They are abnormal calcified mass of dental tissue, usually representing a developmental defect. World widely, they are the most common odontogenic hamartoma. As they are asymptomatic and do not cause any changes in the bone, they are often diagnosed during the routine dental examination. They can be discovered in any location of the dental arch and at any decade of life. There are two types- compound and complex type. Complex odontomas are commonly found to occur in posterior mandible while compound in the anterior maxilla.

Here we present a case of a 14 year old male patient on radiographic examination revealed a compound odontoma which was an incidental finding on an orthopantomogram.

Keywords: *Compound Odontoma; Impacted Odontoma; Complex Odontoma*

Introduction

According to the World Health Organisation (WHO), a compound odontoma is defined as "A malformation in which all dental tissues are represented in a more orderly pattern than in a complex odontoma, so that the lesion contains many tooth like structures. Most of odontomas do not morphologically resemble the normal teeth in the dentition; anyhow, the dental tissues, i.e. enamel, dentin, cementum, and pulp are arranged as in the normal tooth" [1].

In 1866, the term odontoma was first coined by Broca who defined Odontoma as, "a tumor of overgrowth of complete dental tissues" [2]. They are assumed to be hamartomas in nature but not true neoplasms because the epithelial and mesenchymal tissues of an odontoma can appear normal but lack in structural arrangement" [3].

Case Report

A 14 year old male patient reported to the department of Oral Medicine and Radiology for orthodontic treatment. Patient complained of maxillary anterior protrusion and wanted Orthodontic intervention for the same. A complete intraoral and extra-oral examination was done, which did not reveal any abnormality. Further an OPG was advised. The radiographic picture revealed the presence of well-defined multiple radio opaque tooth like structures around the radicular region of 23 and 24. Accounting the clinical presentation as well as classical radiographic presentation, a radiographic diagnosis of compound odontoma was made in this case. Patient did not follow up for further treatment.

Figure 1: *IOPA reveals a well-defined radiolucency surrounding tooth-like structure in the radicular region of 23 and 24 causing displacement of the radicular portion of 24 distally.*

Figure 2: *Orthopantomogram showing well-defined calcified mass in the upper left anterior region resembling tooth like structures.*

Discussion

Odontomas are non-aggressive, hamartomas developmental abnormalities of odontogenic origin appearing in various types such as small, solitary, or multiple radiopaque lesions. They are found on routine radiographic examinations, as they are asymptomatic in nature.

They are so common that they constitute about 22% of all odontogenic tumours of jaw [4].

The etiology of odontoma remains still a mystery. Numerous theories have been put forth to understand the causes for odontoma.

The etiology of odontoma of odontoma has been imputed to numerous pathological conditions such as local irritation/trauma, inflammation/infectious processes and hereditary anomalies. Interestingly, a remnant portion of dental lamina could be an important factor in the etiology of a compound odontoma [5]. They are usually associated with missing tooth, or cases with delayed eruption. However, in this case, no tooth was found missing in the arch.

The incidence varies between 9% - 37% [6]. They are commonly seen in second and third decades, with the mean age reported to be 20.3 years [7]. Compound odontoma is usually located in the maxillary anterior region, over the crowns of erupting tooth or between the roots of completed erupted teeth in the arch [8]. Generally, the compound odontoma appears as a bag containing tooth-like structures rimmed by a narrow radiolucent halo/zone [9-11]. Interestingly, IOPA revealed a similar radiographic appearance in this case.

The most effective clinical method would be a radiographic examination. However, histopathology will exactly help us to identify the type of odontoma- compound or complex.

Occasionally they may grow and lead to expansion of the bone resulting in gross facial asymmetry [12]. Patients diagnosed with odontomas, must undergo surgically removal of odontoma from the site, so as to prevent cyst formation and possible transformation to odoto-ameloblastoma [13,14]. The chances of recurrence is very rare after the surgical management of the lesion but in kids, a regular check-up is advisable.

Conclusion

Most odontomas are discovered accidently, therefore a good clinical and radiographic examination should be performed for all the patients between second to third decade of life, who present with missing tooth, displaced tooth, delayed eruption or any cases associated with trauma. If diagnosed, treatment of the lesion can be done at the earliest.

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