

Unusual Occurrence of Compound Odontoma in Association with Impacted Mandibular Canine- A Case Report

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Case Report

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Abstract: Odontomas are pathological entities of odontogenic origin. They are mostly prevalent with impacted permanent teeth causing delayed shedding of deciduous teeth. They are mostly asymptomatic, but on association with cystic formation can cause discomfort to patient and esthetic concerns. This paper is a short reporting of an incidental finding of odontoma associated with impacted mandibular canine.

Keywords: Compound odontoma, mandibular canine.

INTRODUCTION

According to WHO odontoma is considered as tumour of benign nature mostly reported in the younger age group [1]. Dr Paul Broca 1867 was the first to coin the term 'odontoma' [2, 3]. It is clinically reported as the tumour consisting of masses representing the hamartomatous formations or represents the developmental disturbances pertaining to tooth number [4]. They are usually asymptomatic. Based on the nature and appearance odontomas is classified into two varieties that is complex odontomas and compound odontomas [5]. Compound odontomas represents multiple miniature tooth like structures while complex odontomas represents amorphous/disordered structure not resembling tooth/ tooth like structures. They are mostly encountered with either retained deciduous teeth or impacted permanent tooth. Odontomas are mostly prevalent in the anterior maxilla where 61% cases are reported to be as compound odontomas, 34% complex odontomas, in posterior jaws 59% of reported cases are complex odontomas [2, 6].

Iatrous *et al* reported from his observations 80.7% odontomas in 26 cases were associated with impacted permanent tooth. These groups of tumours are mostly prevalent in the children and young adults of age group 10-19 years. Surgical removal of the odontoma is the best therapeutic option and the prognosis remains very favourable, with lower rate of recurrence's incidence. There are studies that have reported the occurrence of odontoma associated with impacted teeth, the treatment involves the removal of the tumor with or without the impacted tooth, the eruption of which can be enhanced with orthodontic traction [7-9].

CASE REPORT

A 26 years male patient walks into the outpatient department complaining of mobile tooth in the lower front teeth region on the right side. The patient reported no trauma or infections in the lower region. Extra-oral features are non-contributory (Figure 1). Orthopantomography (OPG) reveals canine impaction caused by conglomerate presence of

radiopaque structures surrounded by narrow radiolucent area depicting characteristics of compound odontoma involving 43. There was an indication of inferior neurovascular bundles involvement in relation to the root of impacted mandibular canine (Figure 2). A cone beam computed tomography (CBCT) was performed which reveals similar features and ruled the presence of a compound odontoma (Figure 3). After multidisciplinary treatment planning, the impacted canine was removed along with the denticles (odontoma) under local anesthesia (Figure 4) and bone allograft (SteriGraft®) was used to attempt at bone regeneration at the site of osseous defect (Figure 5). Histopathological report confirms the diagnosis of true denticles (Odontoma). The site was later suture using non resorbable suture material (Figure 6) and healing was satisfactory after. The patient is doing well with no complication after 3 months of followup.



Fig-1: extraoral image of the case



Fig-2: OPG of the case showing tooth like miniature structures along with impacted mandibular canine of 4th quadrant involving inferior neurovascular structures



Fig-3: CBCT showing the features of odontoma in different views



Fig-4: surgical intervention showing creation of bony window to expose the impacted canine and the odontomas



Fig-5: use of bone allograft at the bony defect



Fig-6: post-surgical site

DISCUSSIONS

They are the most commonly encountered odontogenic tumours of the jaws. They are prevalent in the children and young adults usually diagnosed in the second decade of life. They are usually associated with deciduous teeth or impacted canine. Odontoma have a controversial etiology, the reason may be attributed to many factors like apparently impacted teeth, alveolar remodeling of bone etc. Odontomas have been encountered in association with several inflammatory infectious processes, developmental anomalies like Gardner's syndrome, Hermann's syndrome. Association of odontoma can be also seen associated with cyst formation like dentigerous cyst, odontogenic keratocyst[10]. From histopathology point of view the formation of odontoma is believed to have a role by both epithelial and mesenchymal components and features can also be compared to dental tissues [11].

CONCLUSION

The presence of odontoma in association with the mandibular impacted canine needs an accurate early diagnosis and surgical intervention. The association of the impacted canine root with the neurovascular bundles is a true cause of concern and hence the tooth was sacrificed or else orthodontic intervention could have been planned.

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