CASE REPORT

MANAGEMENT OF IMPACTED ODONTOMA IN ANTERIOR MAXILLA – A CASE REPORT

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ABSTRACT

Odontomas are asymptomatic, benign odontogenic tumors often discovered incidentally during routine radiographic examinations or when tooth eruption is delayed. They appear as radio-opaque lesions. They are mainly composed of enamel and dentin, cementum and pulp tissue can also be present in variable amounts. Morphologically, they are classified as complex odontomas-amorphous calcified masses-or compound odontomas-multiple miniature tooth-like structures. This article is a case presentation of a impacted compound odontoma diagnosed for an eleven year old girl upon a routine radiography, making it a lesion of childhood /adolescence

KEY WORDS

Complex odontoma, Compound odontoma, Miniature tooth-like structures

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INTRODUCTION

Odontoma refers to any tumor of odontogenic origin, the growth of which involves both epithelial and mesenchymal cells exhibiting complete differentiation, resulting in the formation of enamel and dentin by functional ameloblasts and odontoblasts.[1]

Paul Broca in 1866 first coined the name "odontoma", defined as tumor formed by the overgrowth of complete dental tissue.[2] Odontomas are considered as hamartomas rather than true neoplasm.[3] WHO classified Odontomas in three types, complex odontoma and compound odontoma and ameloblastic fibro-odontoma.[4] The World Health Organization (WHO), defined compound odontome as "A malformation in which all dental tissues are represented in a more orderly pattern than in the complex odontoma, so that the lesion contains many tooth like structures. Most of these structures do not morphologically resemble the teeth in the normal dentition; however, enamel, dentin, cementum and pulp are arranged as in the normal tooth." [4,5] Disturbances in the eruption of teeth such as impaction, delayed eruption, or retention of primary teeth may be caused by Odontomas.[4] Odontomas can occur at any age and any location in the oral cavity but most commonly manifest at second decade of life and compound odontoma is mostly seen in anterior maxillary region. Odontomas constitute about 22% of all odontogenic tumors of the jaws[6]. The incidence of compound odontome ranges between 9 and 37%.[7] Management of compound odontoma is the surgical excision and recurrence is rare.

CASE REPORT

A 11 years old girl presented to the department of pediatric and preventive dentistry of Dr. R Ahmed dental college and hospital with complain of missing central incisors and aesthetic problem. Her medical history was non-contributory. There was no history of trauma to her orofacial region. There was no family history of unerupted teeth or hypodontia. On examination there was non eruption of both central incisors and overlying mucosa was normal in colour

Figure1: Pre operative picture ofthe patient showing absence of central incisors

Figure 2: Pre operative OPG of the patient showing a radio opaque tooth like mass in anterior maxilla in the region of central incisors

Fig 3: Surgical excision of impacted odontoma

Figure 4: Surgical exposing the lesion by raising mucoperiosteal flap

Figure 5: Rehabilitation with flexible RPD

(figure1) and on palpation there was no pain or tenderness over the area. A radiograph and CBCT was advised. Radiograph showed tooth like masses in the maxillary anterior region and central incisors are missing(figure 2).The CBCT also revealed that there is tooth like mass in the pre maxillary region and missing central incisors (figure 3).There was no history of extraction of the tooth. The clinical and radiographic features suggested the lesion as compound odontoma. After obtaining the informed consent from parents, a surgery was planned under local anaesthesia after obtaining the blood reports within normal limits. A mucoperiosteal flap was raised from labial aspect from canine to canine of upper maxilla. The overlying bone was removed exposing the lesion. The complete odontoma was removed with the help of forceps and elevators (figure 5). Sutures are given. Patient was recalled after one week for suture removal. Patient follow up showed complete and uneventful healing. The rehabilitation of the patient was done by giving flexible denture in anterior region (figure 6).

DISCUSSION

Odontomas are the most common benign odontogenic tumour which is usually found in second decade during routine radiographic examination to assess the cause of missing teeth.[8,9] The compound odontoma composed of highly organized dental tissue. In the case report deformed tooth like structures were found in anterior maxilla. These tooth like structures morphology resembles incisor teeth with surface irregularity. The exact cause of odontoma is controversial but it has been suggested that genetics, infections, inflammation, trauma, or even hyperactivity of odontoblasts may play a role in their development.[10] The treatment of compound odontoma is surgical enucleation and recurrence is rare. Here we also enucleated the lesion and the healing was uneventful. After 1 year follow up there is no recurrence is seen. The results achieved indicate that the early diagnosis of odontomas allows the adoption of a less complex and inexpensive treatment and ensures better prognosis.

CONCLUSION

This case highlights the importance of early diagnosis and management of compound odontomas, particularly when they interfere with normal tooth eruption. The presence of a tooth-like mass in the anterior maxilla causing delayed eruption of the central incisors was effectively diagnosed using radiographic and CBCT imaging. Surgical removal of the odontoma led to successful resolution of the issue, and aesthetic rehabilitation was achieved with a flexible denture. Timely intervention ensured proper healing and restored both function and appearance, underlining the role of pediatric dental assessment in managing developmental anomalies of the dentition.

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