



COMPOUND ODONTOMES IMPEDING ERUPTION OF MANDIBULAR CANINE-A CASE REPORT

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ABSTRACT

Odontomes arise as a result of an aberration in the tissues responsible for the formation of teeth. Though regarded as tumors or hamartomas in the past they are now usually regarded as variations in development of malformations. A 20 yr old female patient with chief complaint of pain in anterior mandibular teeth diagnosed with compound Odontomes, managed surgically. Odontomes are often diagnosed in the second decade of life and are commonly associated with delayed eruption and gross displacement of related permanent teeth which is sometimes accompanied by retention of deciduous teeth, and swelling or both. Odontomes are the most common type of odontogenic tumours and arise as a result of aberration in the tissues responsible for the formation of the teeth. The treatment of the Odontomes is surgical removal.

INTRODUCTION

Odontomes arise as a result of an aberration in the tissues responsible for the formation of teeth. Though regarded as tumors or hamartomas in the past they are now usually regarded as variations in development of malformations. In the 1971 WHO classification they are broadly divided into complex and compound odontomes [1]. Most authorities accept the view today that odontoma represents a hamartomatous malformation rather than a neoplasm. This lesion is composed of more than one type of tissues, and for this reason has been called a composite odontoma. In some composite odontoma the enamel and dentin are laid down in such a fashion that structures bear considerable anatomy resemblance to normal teeth except that they are often smaller than typical teeth. They have been termed compound composite odontomas.

On the other hand when the calcified dental tissues

are simply an irregular mass bearing no morphological similarities even to rudimentary teeth the term complex composite odontoma is used. The complex form of odontoma is less common than compound type.

The etiology of the odontoma is unknown. It has been suggested that the local trauma or infection may lead to the production of such a lesion. It has been suggested by Hitchin that odontomas are either inherited or are due to a mutant gene or interference, possibly post natal, with the genetic control of the tooth development. Budnick has compiled an analysis of 149 cases of odontomas from the literature and found the mean age of detection to be 14.8 years with the most prevalence age of diagnosis and treatment being second decade of life with a slight predilection for occurrence in males (59%) compared with females (41%). The odontoma may be discovered at any age, in any location of dental arches but 67% occurred in the maxilla and 33% in the mandible. In this study, the compound odontoma had a predilection for the anterior maxilla than mandible [2].

Most odontomas are asymptomatic although occasional signs and symptoms relating to their presence

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do occur. These generally consist of un-erupted or impacted teeth, retained deciduous teeth, swelling and evidence of infection. The radiographic appearances of the odontoma is characteristic and are often situated between the roots of the teeth and appear as variable number of tooth like structures with the same peripheral outline. The compound odontoma may contain only a few structures resembling tooth or it may contain several dozen. Then majority of the odontomas in the anterior segment of the jaws are compound composite in type while the majority in the posterior areas are complex composite [3].

Case Report

A 20 year old female patient reported to the department of oral and maxillofacial surgery, PGIDS, Rohtak with chief complaint of pain in lower anterior teeth

region. On examination, left mandibular canine was missing along with imbrications of anterior teeth. On radiographic examination, several numbers of teeth like structures with same peripheral outline were present in between the roots of mandibular left lateral incisor and first premolar along with the impacted left mandibular canine at the lower base (fig-1).

Management: a crevicular incision was given from 32 to 35 with releasing incision given mesial to 32 preserving interdental papilla. Mucoperiosteal flap was reflected. Teeth like structures were removed (fig-2). The thinned out cortical bone was removed with the help of bone cutting bur and canine was exposed. Tooth was removed by sectioning. Bony cavity was toileted (fig-3). Flap was re-approximated and sutured with 3-0 silk. The follow up period was uneventful.

Fig 1. Preoperative OPG showing mandibular left impacted canine along with odontomes in between the roots of 32 and 34



Fig 2. Removed odontome and impacted canine



Fig 3. Intra operative picture showing empty socket after removal of odontome and impacted canine



DISCUSSION

The compound odontome is somewhat similar to the complex odontome except that a higher degree of morphological differentiation is achieved and a number of denticles are formed. Surprisingly, large numbers may be found and it is not unusual to underestimate the number present from the radiograph. They vary greatly both in number and shape [3]. The compound odontome is a malformation in which all the dental tissues are represented in an orderly pattern so that the lesion consists

of many tooth-like structures. It arises from an exorbitant proliferation of the dental lamina or its remnants and is thus laminar odontome. The compound odontome is formed in addition to the normal teeth of a series and occurs most frequently in the anterior maxilla. Odontomes are often diagnosed in the second decade of life and are commonly associated with delayed eruption and gross displacement of related permanent teeth which is sometimes accompanied by retention of deciduous teeth,

and swelling or both. The increased use of routine radiographic examination has resulted in the presence of more of these lesions being discovered earlier before symptoms supervene. Once detected, an odontomes is usually best removed as soon as it is practicable to perform surgery without damaging adjacent teeth or tooth germs. The removal of compound odontomes is facilitated if the thin fibrous sac which encloses them can be preserved intact throughout the operation. The close apposition of rough irregular surfaces of larger complex odontomes and the investing bone makes their removal difficult unless associated with chronic infection has caused some bone resorption as happened with the present case. Both the surgical and the orthodontic treatment of such cases may be complicated and time consuming and therefore it is usually best that they are undertaken in specialist centres [1].

Careful removal of the denticles is in order, particularly if they are in a position to impede the eruption of a tooth of the normal series or to become infected. The

usual precautions with regard to localization of the teeth and preservation of the adjacent normal teeth should be observed as in the removal of single supernumeraries [3].

In the present case, we planned to remove the impacted teeth along with the odontomes, surgically and as we raised the mucoperiosteal flap, there were few tooth-like structures which were removed with the help of elevators. There was thinning cortical bone in parasymphysis region with exposed part of canine. This part was enlarged to expose and remove the canine in two pieces.

CONCLUSION

Odontomas are the most common type of odontogenic tumours or hamartomas and arise as a result of aberration in the tissues responsible for the formation of the teeth. Since odontomas represent a large proportion of odontogenetic lesions, it is necessary to establish early diagnosis and treatment. The treatment of the odontoma is surgical removal and there is no expectancy of recurrence.

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