ODONTOMAS: REVIEW OF LITERATURE AND REPORT OF A CASE

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Abstract

Odontomas are the most common of the odontogenic tumors of the jaws, which are benign, slow growing and nonaggressive. Odontomas are usually asymptomatic but sometimes may interfere with the eruption of the associated tooth leading to impaction or delayed eruption. These lesions are usually diagnosed on routine radiological examination in the second decade of the life. The aim of this paper is to present a thorough review on the etiology, clinical presentation, histopathological features and treatment aspects of odontomas. A case of compound odontoma has been reported along with.

Key words: Odontogenic tumors, odontoma, hamartomas, treatment.

Introduction

The odontoma is perhaps more accurately defined as a hamartoma than a true neoplasm. The term odontoma was first coined by Broca in 1866, who defined it as a tumor formed by overgrowth of complete dental tissue. Odontoma has also been defined as “a tumor that has developed and differentiated enough to produce enamel and dentin.” Odontomas are usually composed of different dental tissues, including enamel, dentine, cement and in some cases, pulp tissue. The second edition of the WHO Histologic Typing of odontogenic tumors classifies odontomas under the broad category of tumors containing odontogenic epithelium with odontogenic ectomesenchyme, with or without dental hard tissue formation. Under this classification, three types of odontomas are listed: odontoameloblastoma, complex and compound odontoma. According to 2005 WHO classification of odontogenic tumours, there are two types of odontomas, compound and complex odontomas. Odontomas have also been classified as central odontoma (which presents inside the bone), peripheral odontoma (which occur in the soft tissue covering the tooth-bearing portions of the jaws) and erupted odontoma according to their clinical presentation.

Case Report

A 30-year-old patient reported to us with a chief complaint of food lodgment and occasional localized pain in the left quadrant of the lower jaw. Patient gave a past dental history of crown placement in relation to 37 as the tooth was grossly carious. On clinical examination, shallow periodontal pockets are noted mesial and distal to 37 (Fig. 1). An intraoral periapical (IOPA) radiograph was taken, which revealed interdental bone loss mesial and distal to 37 and loss of contour of the crown on the mesial aspect of 37. Along with this, a well defined homogenous radiopaque mass was seen between the roots of 36 and 37, covering the medial one third and apical part of the distal root of 36 and mesial root of 37. The mass was covered with radiolucent halo, which was well appreciated on the distal aspect (Fig. 2). No secondary effects like resorption or displacement of the roots were seen. Based on the clinical and radiological features, a provisional diagnosis of localized periodontitis and complex odontoma has been made. The mass was excised surgically under local anesthesia, and histopathologic examination of
the excised mass confirmed the diagnosis of complex odontoma (Fig 3).

**Discussion**

Odontomas constitute about 22% of all odontogenic tumors of the jaws. According to the histopathological perspective, odontomas can be grouped as: (a) complex odontomas, in which the dental tissues are well formed but exhibit a more or less disorderly arrangement; and (b) composite odontomas, in which the dental tissues are normal, but their size and conformation are altered giving rise to multiple small tooth-like structures called denticles. The complex odontomas are usually located in the posterior mandible, while composite odontomas are more often found in the anterior maxilla. Complex odontoma are seen less common in comparison with the compound variety in the ratio 1:2. Here have been isolated reports of odontomas in the maxillary sinus. The exact etiology of odontomas is uncertain, local trauma, infection, growth pressure, hereditary and developmental influences have been suggested as possible causes. Majority of odontomas are asymptomatic, sometimes, swelling, pain, suppuration, bony expansion, delayed eruption and displacement of teeth are noted. Severe cases of infection and regional lymphadenopathies have also been reported in the literature. In rare cases, both intraosseous compound and complex odontomas which are located may erupt in the oral cavity. The radiographic characteristics of odontomas are always diagnostic. The lesion consists of well defined radio-opacity surrounded by a radiolucent halo, which represents an enlarged cystic follicle. In compound odontoma multiple teeth like structures of varying size and shape are seen. Complex odontomas are seen as irregular radiodense masses with no resemblance to dental structures. Radiographically three different development stages can be identified depending on the degree of odontoma calcification. In the first stage the lesion appears radiolucent due to the lack of calcification, intermediate stage is characterized by partial calcification; and in the final stage the odontoma appears radio-opaque which is surrounded by a radiolucent halo. Sometimes, the degree of calcification of odontoma in the primary dentition is less in
Odontomas are benign tumors frequently seen in oral pathology that sometimes produce no symptoms and constitute casual findings of routine radiological studies. Early diagnosis and proper management of odontomas is necessary to prevent later craniofacial complications and other developmental problems.

References


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