Compound odontome: a tooth eruption disturbance

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DESCRIPTION

Odontoma is perhaps more accurately defined as a hamartoma than a true neoplasm.¹ The term odontoma was first coined by Broca in 1866, who defined it as a tumour formed by overgrowth of complete dental tissue.² Odontoma has also been defined as 'tumour' that has developed and differentiated enough to produce enamel and dentin.³ Odontomas are usually composed of different dental tissues, including enamel, dentine, cementum and in some cases, pulp tissue.⁴

Although usually located pericoronally to an impacted tooth, odontoma may also arise from odontogenic progenitor cells within the periodontal ligaments and become located between the tooth root and are not associated with disturbance in eruption.⁵ Odontomas exhibit complete epithelial and mesenchymal differentiation to the point that enamel and dentin are formed. Gabell, James and Payne grouped odontoma according to their developmental origin: epithelial, composite (epithelial and mesodermal) and connective tissue.⁶ Clinically, odontomas are either complex or compound. Odontoma has a limited growth potential, but it should be removed because it contains various tooth formulations that can predispose to cystic change, thereby causing interference with eruption of permanent teeth and considerable destruction of bone. Therefore, we present a case of compound odontome with clinical presentation and radiographic analysis.

An 18-year-old male patient came to the department of orthodontics and dentofacial orthopaedics with non-eruption of lower right canine (figure 1). The patient was healthy and asymptomatic. His

dental and medical history was not significant. Intraoral examination revealed that #42 and #43 had not erupted in the oral cavity and right central incisor was overlapping the left central incisor. There was no sign of inflammation, pain or infection and the surrounding mucosa was normal. An intraoral periapical radiograph revealed the presence of #43 deeply embedded in the alveolar bone. The root of the unerupted #43 was overlapped by multiple well-defined radiopacities in the shape of miniature teeth as seen in figure 2 and almost covering the lower half of the unerupted #43. The lesion was clinically asymptomatic. Based on the clinical and radiographic evaluation, a diagnosis of odontoma was made, although other pathological entities such as ameloblastic fibro-odontoma, osteoblastoma, ossifying fibroma or even osteoma may closely mimic an odontoma.

The mass was incised surgically under local anaesthesia, and histopathological examination of the incised mass confirmed the diagnosis of compound odontome.

Figure 1 Intraoral view.

Figure 2 Radiographic view.

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Learning points

- ▶ Understanding tooth development and eruption will guide a clinician to diagnose and differentiate normal from an abnormal.
- ▶ Constant evaluation about the dynamics of dentition is essential for the diagnosis and treatment of irregularities during this process.
- ▶ The presence of odontoma can delay the exfoliation of a deciduous tooth and the eruption of the permanent successors, which should be carefully observed.
- ▶ An odontoma has a limited growth potential, but it should be removed because it contains various tooth formulations that can predispose to cystic change, interference with eruption of permanent teeth and cause considerable destruction of bone.

Competing interests None.

Patient consent Obtained.

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