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Clinical Images

Compound odontoma obstructing the eruption of a mandibular premolar

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A 12-year-old male presented with over-retention of the deciduous mandibular left first molar and delayed eruption of the permanent mandibular left first premolar. The patient had no history of trauma or serious dental infection. Furthermore, there was nothing special to note in the medical history and family history of systemic diseases and hereditary diseases. Intraoral findings showed a mixed dentition period in which deciduous teeth and permanent teeth were mixed. Both the maxillary and mandibular dentitions were crowding.

The orthopantomogram (OPG) revealed a circular radiopaque region with an unclear border coronal to the unerupted premolar, indicative of an odontoma (Fig. 1a). The retained deciduous tooth was extracted; the tumour, exhibiting numerous tooth-like masses of different sizes (Fig. 1c), was resected under general anaesthesia (Fig. 1b). Post-operatively, the first premolar erupted spontaneously.

An odontoma is a benign tumour with a disorganized proliferation of hard dental tissue and is considered a hamartoma [1]. It can be classified as compound or complex, based on the organization of its tissue. It is usually asymptomatic, causing a delay in early detection [2], and is often diagnosed incidentally on dental radiographs. Delayed diagnosis results in prolonged retention of deciduous teeth and delayed eruption of permanent teeth [3]. In addition, an odontoma can cause jawbone swelling, jawbone deformity, facial asymmetry, adjacent tooth absorption and deformation, dentition malocclusion, malocclusion, and tumour infection that can cause severe jaw inflammation [4]. Therefore, surgical resection at an early stage is the preferred treatment [4]. If the odontoma interferes with the eruption of the impacted permanent tooth (IPT), the IPT will erupt on its own if it has the ability to erupt after odontoma resection. However, if the IPT does not have the ability to erupt on its own, it will be necessary to pull the IPT with orthodontic treatment or extract the IPT [5]. During resection, care must be taken to avoid damaging the adjacent permanent teeth. After excision, the growth and development of the jawbone and occlusion should be monitored. Overall, recurrence is rare, and the prognosis is favourable [6].

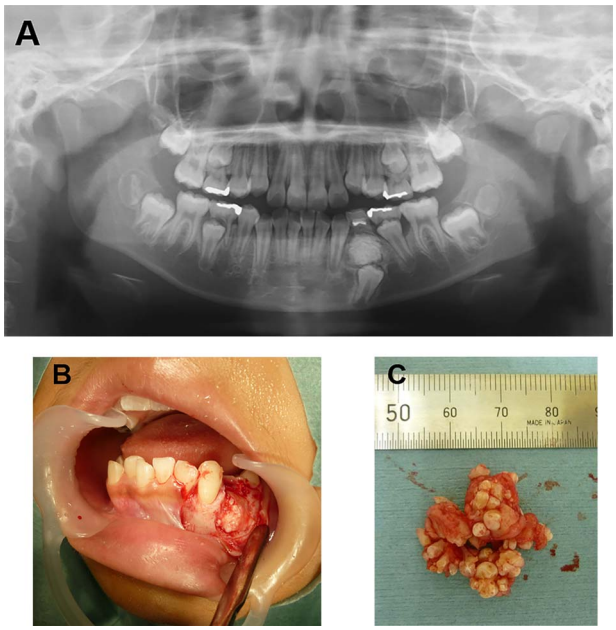

Figure 1. (a) The orthopantomogram depicts the over-retained left deciduous mandibular first molar; a circular, well-defined radiopacity apical to this primary tooth; and the impacted left mandibular first premolar immediately below the lesion. (b) Intra-operative photo: an incision was made in the buccal gingiva, a mucosal periosteal flap was raised and cortical bone was removed to reveal the lesion. (c) Excised material: the odontoma is an aggregate of small, tooth-like masses.

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CONFLICT OF INTEREST STATEMENT

The authors have no conflicts of interest to declare.

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ETHICAL APPROVAL

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CONSENT

We declare that written consent was taken from the patient's guardian for the publication of this report.

GUARANTOR

Takeshi Onda.

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