

Case Reports

MANAGEMENT ODONTOMA IN PEDIATRIC PATIENTS¹⁾

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ABSTRACT

Odontoma in the dentistry is sometimes encountered. Odontoma is a kind of benign tumors associated with tooth development. This condition is usually associated with one or more teeth erupt. In the case of odontoma, ordinary begins with the disappearance of permanent teeth at the beginning of growth. After approval and cooperative child, it will be done odontoma retrieval operation. This is one of the ways in which to deal with complaints of child and family. This treatment requires the patient's cooperation, dentist team (pediatric dentist and oral surgery), and requires the use of local anesthesia as control pain during surgery. The advantage of local anesthesia is making available for the good cooperation between patient and dentist during treatment in oral cavity, with a faster recovery rate. This case report aims to show how odontoma case management in pediatric patients. The conclusions are precision odontoma case management will affect the success of treatment in pediatric patients, depending on the approach to pediatric patients, the severity of the case and operator skill.

Keywords: *odontoma, management of pediatric patients*

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Laporan Kasus

PENATALAKSANAAN ODONTOMA PADA PASIEN ANAK¹⁾

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ABSTRAK

Odontoma dalam bidang kedokteran gigi merupakan hal yang kadang dijumpai. Odontoma adalah sejenis tumor jinak yang terkait dengan perkembangan gigi. Kondisi ini biasa terkait dengan satu atau lebih gigi yang tidak erupsi. Pada kasus odontoma, biasa diawali dengan ketidakhadiran gigi permanen pada saat awal tumbuhnya. Setelah mendapat persetujuan dan anak kooperatif, maka akan dapat dilakukan operasi pengambilan odontoma. Hal ini adalah salah satu cara yang dilakukan untuk mengatasi keluhan anak dan keluarganya. Perawatan ini membutuhkan kerjasama dengan pasien, tim drg (anak dan bedah mulut), dan memerlukan penggunaan anestesi lokal sebagai kontrol rasa sakit selama operasi berlangsung. Keuntungan anestesi lokal adalah memungkinkan diperolehnya kerjasama yang baik antara pasien anak dan dokter selama dilakukan perawatan rongga mulutnya, dengan tingkat pemulihan lebih cepat. Laporan kasus ini bertujuan untuk menunjukkan bagaimana penatalaksanaan kasus odontoma pada pasien anak. Kesimpulan yang diambil adalah ketepatan penatalaksanaan kasus odontoma akan mempengaruhi keberhasilan perawatan pada pasien anak, tergantung pada pendekatan pasien anak, keparahan kasus dan ketrampilan operator.

Kata kunci: *odontoma, penatalaksanaan pasien anak*

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Patient cooperative and sophisticated after local anaesthesia





Pasien afraid and close her eyes



Hecting after open the flap gingiva



Three partikel of Odontoma

PENDAHULUAN

Odontoma adalah malformasi atau lesi perkembangan hamartoma non-agresif yang berasal dari odontogenik, terdiri dari email, dentin, sementum dan jaringan pulpa (oleh karena itu disebut juga campuran yang terdiri dari multiple atau lebih dari satu tipe).

An **odontoma** is a benign tumour^[1] of odontogenic origin (i.e. linked to tooth development).^[2] Specifically, it is a dental hamartoma, meaning that it is composed of normal dental tissue that has grown in an irregular way.

The average age of people found with an odontoma is 14.^[3] The condition is frequently associated with one or more unerupted teeth. Though most cases are found impacted within the jaw there are instances where odontomas have erupted into the oral cavity.^[4]

In addition to the above forms, the dilated odontoma is an infrequent developmental alteration that appears in any area of the dental arches and can affect deciduous, permanent and supernumerary teeth. Dens invaginatus is a developmental anomaly resulting from invagination of a portion of crown forming within the enamel organ during odontogenesis. The most extreme form of dens invaginatus is known as dilated odontoma.

Klasifikasi. Ada dua tipe odontoma, yaitu odontoma compound dan odontoma kompleks

Odontoma compound mempunyai struktur yang mirip dengan gigi kecil atau denticle, diskrit, terbungkus di dalam fibrous connective tissue stroma (stroma jaringan ikat berserat). A *compound* odontoma still has the three separate dental tissues (enamel, dentin and cementum), but may present a lobulated appearance where there is no definitive demarcation of separate tissues between the individual "toothlets" (or denticles). It usually appears in the anterior maxilla.

Sedangkan odontoma complex terdiri dari campuran atau massa tak teratur dari jaringan keras dan lunak odontogenik yang matang dan berdiferensiasi secara buruk sebagai email, dentin atau sementum sehingga tidak memiliki kemiripan dengan gigi. .^[5]

The *complex* type is unrecognizable as dental tissues, usually presenting as a radioopaque area with varying densities. It usually appears in the posterior maxilla or in the mandible.

Sebagian besar odontoma ditemukan selama dua dekade pertama kehidupan dan tidak ada kelaziman gender yang signifikan.

Kelainan ini sering asimtomatik dan ditemukan secara kebetulan dengan pemeriksaan radiografi rutin dimana odontoma biasanya tampak sebagai massa radiopaque yang padat.

Tetapi kadang-kadang lesi ini dapat ditemukan secara tidak kebetulan apabila ciri-ciri klinisnya sudah terlihat ekspansi tulang, nyeri dan pergeseran gigi atau gigi normal yang tidak erupsi.

Epidemiology

Odontomas are thought to be the second most frequent type of odontogenic tumor worldwide (after [ameloblastoma](#)), accounting for about 20% of all cases within this relatively uncommon tumor category which shows large geographic variations in incidence.^[6]

Pada bulan Juli 2014 di [Mumbai](#), India, dokter bedah pada Mumbai's JJ Hospital mengeluarkan 232 partikel mirip gigi yang merupakan pertumbuhan dari suatu kompleks odontoma yang berkembang pada mandibula dari anak usia 17 tahun. **This is thought to be the largest ever number of such growths to be identified in a patient.**^[7]

Another exceptional case of compound odontoma was reported in November 2014, involving the extraction of 202 teeth from a 7-year old girl in Gurgaon, India. ^[8]

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Odontoma

[Dr Ayush Goel](#) and [Dr Frank Gaillard](#) et al.

Odontomas are one of the most common of [mandibular lesions](#) encountered, and the most common odontogenic tumours of the mandible (see [WHO classification scheme for odontogenic tumours](#) (1992)) accounting for up to two thirds of all such tumours (the next most common are [ameloblastomas](#) making up the majority of the remaining third) .

Epidemiology

Typically diagnosed in the 2nd decade of life.

Pathology

They can be thought of a 'tooth hamartomas' with the lesion consisting of various tooth components (dentin, enamel).

They are divided histologically into:

- [complex odontoma](#)
- [compound odontoma](#): identifiable tooth components

Associations

Approximately half will be associated with an unerupted tooth, the rest being diagnosed both prior to or after tooth eruption.

Radiographic features

Initially the tumour is lucent, but with time it develops small calcifications which eventually coalesce to form a radiodense lesion with a lucent rim.

Complications

Epithelial components may occasionally give rise to a [dentigerous cyst](#).

Treatment and prognosis

Surgical resection is the treatment of choice and there is no recurrence.

Discussion

Odontomas are relatively common odontogenic lesions, generally asymptomatic, and are rarely diagnosed before the second decade of life. They frequently lead to impaction or delayed eruption of permanent teeth.^{1,2}

This case described in this study were initially diagnosed as compound odontomas since the radiographic examination of the lesions showed a variable number of calcified interior structures anatomically similar to small teeth.^{1,2,8,9} All tumors were found on the anterior region of the maxilla, which, according to many researchers^{5,6,7} is the most common location. The patient had suffered a trauma in the region where the lesion developed. According to the literature, the development of the odontoma could be related to this trauma.^{7,8} In both cases the observed swelling was possibly related to the size of the lesions, since one of them showed three small toothlike interior structures.

Delayed diagnosis of the lesion resulted in complete root formation of the unerupted upper central incisor, making it necessary to use orthodontic traction of the affected tooth in order to guide it to an adequate position in

the dental arch. When the impacted tooth came into the dental arch, it was observed that the same crown length for the upper right and left central incisors was not achieved.

In this case, the diagnosis was done during the period of primary dentition, and surgical removal of the lesion was effected before the exfoliation of the primary teeth. Ideally, odontoma should be removed when the permanent teeth adjacent to the lesion exhibit about one half of their root development because this ensures safety of the normal permanent teeth and prevents interference with their eruption.

In this case, early treatment could be performed because the lesion was localized close to the incisal edge of the upper permanent incisor crowns, which were already fully formed.

For the same reason, iatrogenic damage to the root formation of these teeth was very unlikely. The early diagnosis and treatment of the pathology in this case probably prevented the impaction of the permanent upper incisors. However, upon eruption the upper left permanent central incisor was labially and mesially inclined while the upper right permanent central incisor was distally and lingually inclined. After being treated with removable appliances for one year, the child had her four upper permanent incisors aligned in the maxillary arch. Although a discrepancy in the upper midline could be easily noticed, it could not be attributed solely to the presence of the odontoma in the past, since the child had habits such as fingernail biting and chewing pencils.

Clinical experience suggests and the dental literature supports that an individualized radiographic examination of any pediatric patient that presents clinical evidence of delayed permanent tooth eruption or temporary tooth displacement with or without a history of previous dental trauma should be performed.

