



# Compound Odontoma-Diagnosis and Treatment in Pediatric Dentistry: Three Case Reports

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## Abstract

Odontomas are the most common odontogenic tumors. They are considered to be hamartomas rather than neoplasms, and are composed of natural teeth tissues: enamel, dentin, and cementum and pulp tissue. They are broadly classified into compound odontoma (small tooth like structures) and complex odontoma (a conglomeration of dentin, enamel and cementum). Generally, odontomas have been associated with trauma during primary dentition as well as with inflammatory and infectious processes, hereditary anomalies (Gardner syndrome, Hermann's syndrome), odontoblastic hyperactivity and alterations in the genetic components responsible for controlling dental development. This study presents three cases of odontoma and treatments.

**Keywords:** Compound odontoma; Child; Tumors

## Introduction

Odontomas are the most common odontogenic tumors. They are considered to be hamartomas rather than neoplasms, and are composed of natural teeth tissues: enamel, dentin, cementum and pulp tissue [1]. According to the World Health Organization classification, two distinct types of odontomas are acknowledged: complex and compound odontoma. In complex odontomas, all dental tissues are formed, but appeared without an organized structure. In compound odontomas, all dental tissues are arranged in numerous tooth-like structures known as denticles [2]. Generally these malformations are intraosseous, but occasionally they may erupt into the oral cavity [3,4]. The etiology of the odontoma is unknown. Generally, odontomas have been associated with trauma during primary dentition as well as with inflammatory and infectious processes, odontoblastic hyperactivity and alterations in the genetic components responsible for controlling dental development [5]. Odontomas can also manifest as part of syndromes, such as basal cell nevus syndrome, Gardner syndrome, familial colonic adenomatosis, Tangier disease or Hermann syndrome [6]. Conservative surgical excision is the treatment of choice. Compound and complex odontomas are well encapsulated and easily enucleated from the surrounding bone [7].

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## Case Presentation

### Case 1

13-year-old boy referred to our clinic because of an unerrupted maxillary santral incisor (Figure 1). The lesion was disturbing the eruption of the maxillary central incisor (Figure 2). Lesions removed surgically (Figure 3). The histopatological examination confirmed that the lesions are compound odontomas. Following the surgery, the persistant tooth started eruption (Figure 4 and 5).

### Case 2

A trauma patient referred to our clinic with a broken central tooth (Figure 6). The tooth was



Figure 1: Intraoral view of pre-op.

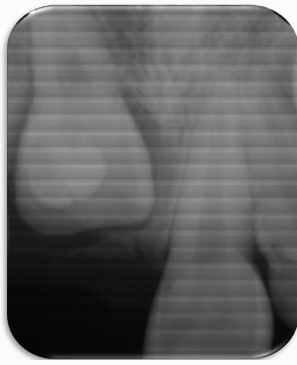


Figure 2: Periapical radiography of pre-op.



Figure 7: Periapical radiography of pre-op.



Figure 3: View of odontomas.



Figure 8: View of odontomas.



Figure 4: Intraoral view of post-op.



Figure 9: Intraoral view of post-op.



Figure 5: Panoramic radiography of post-op.



Figure 10: Periapical radiography of post-op.



Figure 6: Intraoral view of pre-op.

broken due to a bicycle accident two years ago. He was 11-year-old boy. The central incisor was root canal treated. There weren't any known syndrome or systemic disease of the patient. We thought that the etiology of the odontoma might be related to the trauma so we

removed the odontoma because it might affect the prognosis of the tooth (Figure 7). Odontomas removed surgically (Figure 8). The histopathological examination confirmed that the lesion is a compound odontoma. We restored the tooth after root canal treatment (Figure 9 and 10).

### Case 3

9-year-old boy referred to our clinic because of an unerupted



Figure 11: Intraoral view of pre-op.



Figure 12: Panoramic radiography of pre-op.



Figure 13: View of odontomas.

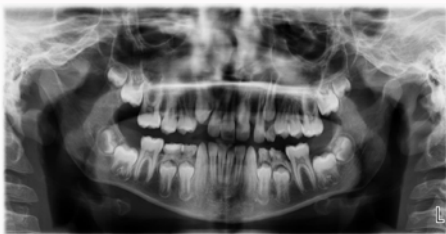


Figure 14: Panoramic radiography of post-op.

maxillary central incisor (Figure 11). The lesion was disturbing the eruption of the maxillary central incisor (Figure 12). The lesion was removed surgically (Figure 13). The histopathological examination confirmed that the lesion is a compound odontoma. Following the surgery, the persistent tooth started eruption (Figure 14 and 15).

## Discussion

Odontomas represent the most common type of odontogenic benign jaw tumors among patients younger than 20 years of age [8]. In our cases reported, the incidence age of odontoma is consistent with the literature. Odontomas are slow-growing, asymptomatic neoplasms found in jaws. In about 80% of cases, they are associated with impacted or un-erupted teeth. Although they are commonly



Figure 15: Intraoral view of post-op.

asymptomatic, clinical indicators of odontoma may include retention of deciduous teeth, non eruption of permanent teeth, pain, expansion of the cortical bone, tooth displacement [9]. Orthodontic treatment may be indicated to correct malocclusion. In our two cases reported, odontomas are associated with un-erupted teeth. The treatment according to the available literature is surgical extraction with complete removal of any associated soft tissues, since the odontoma may interfere with eruption of the permanent tooth displace the adjacent teeth or give rise to a dentigerous cyst [6].

## Conclusion

The results achieved indicate that early diagnosis of odontomas in primary dentition is essential in order to prevent later complications, requires less expensive treatment, ensure better prognosis, avoid relapse of the lesion, avoid displacement or devitalisation of adjacent tooth.

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