ClinicSearch

Clinics in Nursing

Vismit Munesh Gami *

Open Access

Short Communication

Odontoma: A Comprehensive Review for Dental Professionals

Dev Desai, Vismit Munesh Gami *

MBBS Smt. NHLMMC, Ahmedabad, India

***Corresponding Author:** Vismit Munesh Gami, MBBS Smt. NHLMMC, Ahmedabad, India.

Received date: February 17, 2023; Accepted date: March 06, 2023; Published date: March 14, 2023

Citation: Dev Desai, Vismit Munesh Gami (2023), Odontoma: A Comprehensive Review for Dental Professionals, *Clinics in Nursing*, 2(2); **DOI:**10.31579/ 2835-8147/032

Abstract

Odontomas are the most prevalent type of odontogenic tumours, characterized by the abnormal growth of dental tissues during tooth development. There are two main types of odontomas: compound and complex. Genetic factors and disruptions in dental development contribute to odontoma formation. Accurate diagnosis through clinical examination, radiographic imaging, and histopathological evaluation is essential for effective management. Understanding the nature of odontomas and their significance in dental practice aids in timely intervention and optimal oral health outcomes.

Keywords: abortion services; induced abortion; spontaneous abortion; records

Introduction

Odontomas are the most common type of odontogenic tumours, often referred to as hamartomas, which develop during tooth formation [1]. As dental professionals, it is essential to have a comprehensive understanding of odontomas to diagnose and manage these conditions effectively [2]. This essay aims to provide a detailed overview of odontomas, including their aetiology, classification, clinical presentation, radiographic features, histopathology, treatment options, and prognosis.

Aetiology:

The exact cause of odontomas remains unclear; however, various theories suggest that genetic factors, trauma, infections, and disruptions during tooth development may contribute to their formation. Odontomas are primarily believed to result from the proliferation and disorganization of odontogenic epithelium and mesenchymal cells during tooth development [3].

Classification:

Odontomas are classified into two main types: compound odontomas and complex odontomas [4]. Compound odontomas are characterized by the presence of multiple small tooth-like structures, while complex odontomas consist of a disorganized mass of dental hard tissues without a definite tooth-like structure.

Clinical Presentation:

Odontomas are often asymptomatic and are frequently discovered during routine radiographic examinations. However, larger odontomas may cause disturbances in tooth eruption, delayed eruption, malocclusion, or localized swelling [5]. Some patients may experience pain or infection if odontomas become exposed or undergo cystic degeneration.

Radiographic Features:

Radiographically, odontomas appear as well-defined, radiopaque masses surrounded by a radiolucent halo [6]. In compound odontomas, multiple miniature tooth-like structures can be observed, while complex odontomas exhibit a mixed radiolucent-radiopaque appearance due to the disorganized arrangement of dental tissues.

Histopathology:

Histologically, compound odontomas consist of numerous miniature teeth, resembling normal tooth structures, including enamel, dentin, and pulp [7]. In contrast, complex odontomas lack a recognizable tooth-like organization and exhibit a haphazard arrangement of dental tissues, including enamel, dentin, cementum, and pulp.

Treatment:

Depending on the size, location, and associated complications, the treatment of odontomas involves surgical removal, either by enucleation or curettage [8]. Small odontomas can often be easily excised, while larger or impacted odontomas may require a more extensive surgical approach. In some cases, a conservative approach with regular follow-up may be appropriate, particularly in asymptomatic patients with minimal impact on tooth eruption.

Prognosis:

The prognosis for patients with odontomas is generally excellent. Recurrence is rare, especially after the complete removal of the lesion. Regular long-term follow-up is recommended to monitor the development and eruption of adjacent teeth and ensure proper oral health maintenance.

Differential Diagnosis:

When encountering radiopaque lesions in the oral cavity, it is important to consider other differential diagnoses, such as ameloblastic fibro-odontoma, ameloblastic fibroma, compound composite odontoma, and complex composite odontoma [9]. A thorough evaluation of the clinical and radiographic findings and histopathological examination aids in accurate diagnosis and appropriate treatment planning.

Conclusion:

Odontomas are common benign tumours of odontogenic origin that require prompt recognition and management [10]. Dental professionals should be well-versed in the aetiology, classification, clinical presentation, radiographic features, histopathology, treatment options, and prognosis of odontomas. Early detection, accurate diagnosis, and appropriate treatment planning play a vital role in ensuring optimal patient care and outcomes. By staying updated on current research and clinical guidelines, dental professionals can provide effective management and ensure the long-term oral health of their patients

References

1. Lawal AO, Adisa AO, Popoola BO. (2013) Odontogenic tumours in children and adolescents: a review of forty-eight cases. *Ann Ib Postgrad Med*. 11(1):7–11.
2. Gedik R, Müftüoğlu S. (2014) Compound Odontoma: Differential Diagnosis and Review of the Literature. *West Indian Medical Journal*.
3. Sharma R, Prabhadevi MC [2011] Odontome: A Brief Overview. *Int J Clin Pediatr Dent*. 4(3):177–185.
4. Reddy GSP, Reddy G V., Sidhartha B, Sriharsha K, Koshy J, et.al., Large Complex Odontoma of Mandible in a Young Boy: A Rare and Unusual Case Report. Case Rep Dent. 1–4.
5. Isola G, Cicciù M, Fiorillo L, Matarese G. [2017] Association Between Odontoma and Impacted Teeth. *Journal of Craniofacial Surgery*. 28(3):755–758.
6. Sasirekha B, Mathew P, Ganeshkumar M, Austin R, Prabhu R. [2016] Large radiopaque lesion in the posterior mandible: A challenging case. *J Pharm Bioallied Sci.* 8(5):164.
7. Astekar M, Manjunatha BS, Kaur P, Singh J. [2014] Histopathological insight of complex odontoma associated with a dentigerous cyst. Case Reports.
8. Pacifici A, Carbone D, Marini R, Pacifici L. Surgical Management of Compound Odontoma Associated with Unerupted Tooth. Case Rep Dent. 1–6.
9. Curé JK, Vattoth S, Shah R. [2012] Radiopaque Jaw Lesions: An Approach to the Differential Diagnosis. *RadioGraphics*. 32(7) 1909–1925.
10. Wright JM, Soluk Tekkeşin M. [2017] ODONTOGENIC TUMORS. WHERE ARE WE IN 2017? J Istanb Univ Fac Dent. 51(0).