IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 16, Issue 5 Ver. IV (May. 2017), PP 103-105
www.iosrjournals.org

Concrescence of A Maxillary Third Molar And Second Molar: Report of A Rare Case

Dr. Manoj S [1],Dr. Sanoj N M [2]
[1](Additional Professor, Department Of Maxillofacial Surgery ,Government Dental College Trivandrum,India)
[2](Post Graduate, Department Of Maxillofacial Surgery ,Government Dental College Trivandrum,India)

Abstract: *Concrescence is an uncommon developmental anomaly in which teeths are united in the cementum but not in the dentin. The incidence of concrescent teeth is reported to be highest in the posterior maxilla. The cardinal radiological sign of concrescence is close proximity of adjacent teeth with no detectable intervening periodontal ligament space. if difficulty is encountered while extracting a tooth in the maxillary posterior region, to avoid the complications such as fracture of tuberosity or floor of maxillary sinus. Routine radiographs should be taken prior to extractions, to avoid any such complications and to alter the treatment plan.*

Keywords: *Concrescence; Developmental Anomaly; Cemental Union; Hypercementosis.*

I. Introduction

Dental anomalies usually include changes in size, shape, or number of teeth [1] More than 500 anomalies with genetic etiology and a similar number with multifactorial etiologies have been identified in orofacial region [2].The most important anomalies of shape are fusion, gemination, and concrescence. Concrescence is an uncommon developmental anomaly in which teeths are united in the cementum but not in the dentin. The incidence of concrescent teeth is reported to be highest in the posterior maxilla. Altered morphology of teeth can be due to changes in the genetic process of odontogenesis.[4,5] Although the exact etiology of concrescence has not yet been explained, it is usually suspected that space restriction during development of the dental follicle, local trauma, excessive occlusal force or local infection after development play an important role. The cardinal radiologic sign of concrescence is close proximity of adjacent teeth with no detectable intervening periodontal ligament space. Maxillary molars are the teeth most frequently involved, especially a third molar and a supernumerary tooth. It is a rare dental anomaly that may be inadvertently diagnosed during tooth extraction[5]

The presence of concrescent teeth may influence surgical procedures along with periodontal, endodontic diagnosis and treatment. So, to reduce the risk of complications associated with the condition, concrescence should be carefully identified and treatment plan should be subsequently altered.[4] The purpose of this article is to report one case of concrescence between maxillary second and third molar.

I. Case Report

A 47-year-old male patient reported to the department of maxillofacial surgery , Government Dental college ,Trivandrum with a complaint of pain on left upper back teeth region for 2 weeks . Clinical examination showed caries exposed 27 and buccaly placed 28 causing trauma to left check region. Endodontic consultation adviced extraction of 27 because of poor endodontic prognosis. OPG revealed presence of an impacted third molar in close proximity to the second molar. Under local anesthesia we tried to extract the second molar, but the tooth was firm to be extracted.

The tooth was patiently luxated and subsequently extracted. On examination of the extracted specimen, the root of the second molar was bulbous and hypercementosed, fused with the impacted third molar, which was extracted along with the second molar, Which suggested concrescence of teeth. No oro antral communication, excessive bleeding or fracture of maxillary tuberosity associated with extraction, Surgical site closed using 3-0 silk .Post operative period was uneventful.

Fig 1:Pre operative

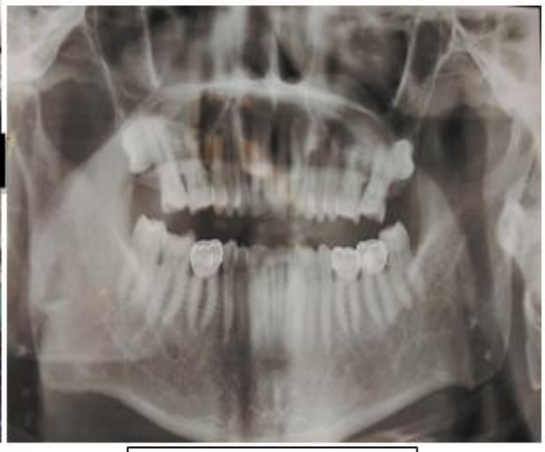

Fig 2: OPG

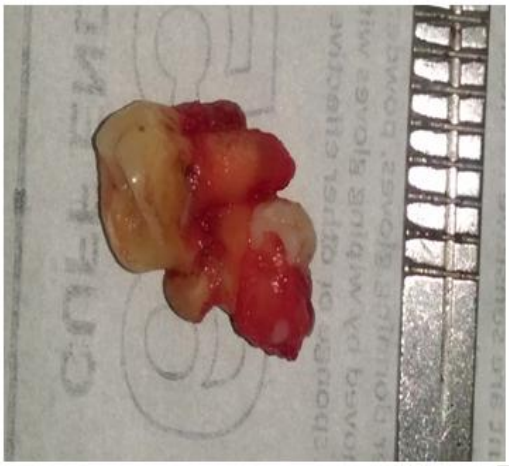

Fig3: Intra Operative showing Concresence

Fig4: Post Operative Surgical Site

II. Discussion

The size and shape of teeth are usually affected by the genetic factor, although internal and external factors such as trauma, radiation, hormonal changes, or nutritional deficiencies can as well affect the number, shape, or the quality of teeth. [5] Odontogenic anomalies caused by the division or fusion of tooth germ include gemination, fusion and concrescence[6]. Gemination is a division of tooth germ; which leads to the formation of a tooth with two crowns but usually with a single root and a root canal. Fusion is the procedure of merging two separate tooth germs by dentine which leads to the formation of one tooth. Gemination and fusion are clinically similar and may be distinguished by counting the number of teeth. Another anomaly is concrescence with a development pattern usually affects a second molar with roots near to roots of an impacted third molar .[3]It is more common on maxillary second and third molars. However, its prevalence is not related to age, gender, and race. It is stated that concrescence occurs during root formation or after the radicular phase of tooth development .[7]

Concrescence is one of the common anomalies of shape of teeth characterized by union between adjacent teeth, through cementum only and not dentin.[8] This may occur during development "true concrescence" or after development "acquired concrescence". The mechanisms involved are unclear but it has been speculated that restriction of space during development, local infections trauma and excessive occlusal forces may play a role in this anomaly. It is the form of fusion between teeth that occurs during root formation i.e. developmental, or after the root development is complete. The exact etiology is unknown concrescence can be due to trauma or according to Gundu Z.K. et. al. (2006) chronic inflammation which leads to resorption of interdental bone and deposition of cementum between the roots.(1) Both primary and secondary teeth may be involved. [10]This dental anomaly has a higher incidence of occurrence in the posterior maxilla. The detection of concrescence is important because of the complications it can cause during exodontias.

Detecting concrescence clinically is practically impossible and at times misdiagnosed radiographically as a simple radiographic superimposition of roots of adjacent teeth. Preoperative radiographs with different angulation should be taken to help in diagnosis.Cone beam CT is valuable in case of heightened suspicion.

III. Conclusion

Clinicians should be aware of this dental anomaly and should consider concrescence, if difficulty is encountered while extracting a tooth in the maxillary posterior region, to avoid the complications such as fracture of tuberosity or floor of maxillary sinus. Routine radiographs should be taken prior to extractions, to avoid any such complications and to alter the treatment plan, if required,and maxillofacial surgeons help made available at all times.

Reference

[1]. Roychoudhary A, Gupta Y, Parkash H. Mesiodens: a retrospective study of fifty teeth. JOURNAL-INDIAN SOCIETY OF PEDODONTICS AND PREVENTIVE DENTISTRY. 2000;18:144-6.
[2]. Miziara R, Mendes-Junior C, Wiezel C, Simões A, Scuoteguazza J, Azoubel R. A statistical study of the association of seven dental anomalies in the Brazilian population. Int j morphol. 2008;26:403-6.
[3]. Neville BW. Oral and maxillofacial pathology: Elsevier Brasil; 2009.
[4]. Gunduz K, Sumer M, Sumer A, Gunhan O. Concrescence of a mandibular third molar and a supernumerary fourth molar: Report of a rare case. British Dental Journal 2006;200(3):141-2.
[5]. Rozsa N. Prevalence and treatment possibilities of numerical, morphological dental anomalies and malposition during childhood: Szeged UniV; 2008.
[6]. Romito LM. Concrescence: Report of a rare case. Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology & Endodontics2004;97(3):325-7.
[7]. Badjate SJ, Cariappa K. Concrescence: report of rare complication. The New York state dental journal. 2008;74:56-7.
[8]. Sugiyama M, Ogawa I, Suei Y, Tohmori H, Higashikawa K, Kamata N. Concrescence of teeth: cemental union between the crown of an impacted tooth and the roots of an erupted tooth. Journal of Oral Pathology & Medicine 2007; 36 (1): 60-2.
[9]. Gernhofer K. Concrescence of a maxillary second and third molar. Journal of the California Dental Association2009;37(7):479-81.
[10]. Gunduz K, Sumer M, Sumer A, Gunhan O. Concrescence of a mandibular third molar and a supernumerary fourth molar: Report of a rare case. British dental journal. 2006;200:141-2.