

Fused and impacted maxillary third molar and supernumerary teeth- A rare case entity

Vaibhavi Bhat, Poornima Reddy R

Department of Oral and Maxillofacial Surgery, A.J Institute of Dental Sciences, Karnataka, India

Abstract

Fusion of impacted third molar and the supernumerary teeth is an unusual finding. Fusion of teeth is the developmental abnormality caused during tooth development. These are usually found during routine radiographic examination. Extraction of such teeth is usually recommended if it is associated with any pathology or as a part of other treatment plan such as orthodontic treatment or prosthetic rehabilitation. This article presents a rare case which was treated with transalveolar extraction as a part of orthodontic treatment.

Keywords: Fusion, impacted third molar, supernumerary teeth, transalveolar extraction

Introduction

Fusion of teeth is the type of developing anomaly normally caused due to union of tooth germs at the time of odontogenesis at different levels like enamel, dentin or cementum [1]. They are commonly seen in deciduous dentition and rarely found in maxilla [2]. This article presents a case report of unusual occurrence of impacted maxillary third molar fused inversely with a supernumerary teeth.

Case report

A 20-year-old patient was referred from department of orthodontics to department of oral and maxillofacial surgery for the extraction of maxillary and mandibular third molar as a part of orthodontic treatment. Clinical examination revealed missing third molar bilaterally in the maxillary and mandibular arch. Orthopantomogram (OPG) of the patient revealed the impacted maxillary and mandibular third molar bilaterally (Fig 1). Informed consent was taken from the patient for transalveolar extraction irt 28.



Fig 1: Pre-op OPG of the patient revealing impacted third molar with in all the four quadrants

Posterior superior alveolar nerve block and greater palatine nerve block with 2% lignocaine with 1:80,000 adrenaline was administered in the second quadrant. Incision was given and triangular flap was raised. Transalveolar extraction was performed by removing the bone overlying the tooth, luxating it and removing in total. The extraction site was examined to rule out any sinus perforation and was closed primarily with 3-0 silk sutures. The examination of the tooth revealed fused 3rd molar and a supernumerary teeth with incompletely formed roots (Fig 2 a, b). Patient was given

the postoperative instructions and recalled after 7 days for suture removal. Healing was satisfactory after 1 week and sutures were removed, and no postoperative complications were noted. All the other third molars were extracted on successive appointments.

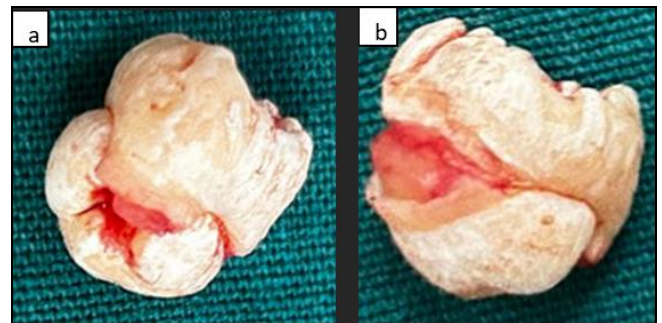


Fig 2: a, b - Extracted tooth showing fusion of supernumerary teeth and a 3rd molar with incompletely formed roots

Discussion

Various developmental anomalies in morphology during odontogenesis are described in literature such as fusion, gemination, concrescence, dilaceration. Fusion is union of two adjacent teeth and it can be between the tooth germ of a normal tooth with a supernumerary one or with two normal tooth germs [3]. It is also referred to as “synodontia” by Dejonge [4]. According to Kumar A *et al* prevalence of tooth fusion is approximately 0.5-2.5% in the primary dentition [1]. The frequency of fusion of a permanent tooth with a supernumerary is <0.1% of cases and usually observed maxillary anterior teeth [5].

Mitate *et al*, Conte *et al*, Ozcan *et al*, Abrams *et al* are some of the authors who have reported the cases of fusion of third molar with supernumerary teeth [2, 6, 8].

Extraction of the such teeth is indicated in case as a part of orthodontic and prosthetic treatment purpose, and if is associated with periapical or periodontal pathology.

Here we reported a case of impacted and fused maxillary third molar with supernumerary teeth, which was managed by transalveolar extraction without any complications.

Conclusion

Fusion of maxillary third molar and a supernumerary tooth is a rare entity, most commonly diagnosed on a routine radiograph. Here we reported a case which was treated successfully with transalveolar extraction with no associated complication as a part of orthodontic treatment plan.

References

1. Kumar A, Srivastava RK, Ali I, Wadhvani P, Singh H. Fused mandibular third molar with supernumerary tooth: A rare case report. *Indian Journal of Oral Sciences*, 2015, 6(1).
2. Mitate E, Kawano S, Mikami Y, Kiyoshima T, Ikebe T, Nakamura S. A case of inversely fused tooth of impacted maxillary third molar and supernumerary tooth. *Int J Case Rep Images*, 2017;8(2):129-32.
3. Ferreira-Júnior O, Ávila LD, Sampieri MB, Dias-Ribeiro E. Lower third molar fused with a supernumerary tooth: diagnosis and treatment planning using Cone-Beam Computed Tomography. *RGO-Revista Gaúcha de Odontologia*, 2014;62:453-8.
4. Sultan N. Incidental finding of two rare developmental anomalies: Fusion and dilaceration: A case report and literature review. *Journal of Natural Science, Biology, and Medicine*, 2015;6(1):S163.
5. Rai R, Kaura S, Bhardwaj S, Satia G, Budhiraja N. Fusion of multiple impacted supernumerary teeth with maxillary third molar-A rare case report. *Indian Journal of Dental Sciences*, 2021;13(2):125.
6. Conte M, Lombardi P, Linfant J. A supernumerary tooth fused to the distal surface of a mandibular third molar. *Journal of the New Jersey Dental Association*, 2002;1:73(1-2):8-9.
7. Ozcan G, Sekerci AE, Soylu E, Nazlim S, Amuk M, Avci F. Role of cone-beam computed tomography in the evaluation of a paradental cyst related to the fusion of a wisdom tooth with a paramolar: A rare case report. *Imaging science in dentistry*, 2016;1:46(1):57-62.
8. Abrams RA, Nelson DL. Fusion of a third molar to a supernumerary tooth with an associated dentigerous cyst. *Australian Dental Journal*, 1979;24(3):141-2.