

Multiple supernumerary teeth and odontoma in the maxilla: A case report

P. B. SOOD, BRINDA PATIL, SUHAS GODHI¹, DEVI CHARAN SHETTY²

Abstract

Most supernumerary impacted teeth are located in the anterior maxillary region. They are classified according to their form and location. Their presence may give rise to a variety of clinical problems. The detection of supernumerary teeth is best achieved by thorough clinical and radiographic examination. Their management should form part of a comprehensive treatment plan. This article presents an overview of the diagnostic problems associated with multiple supernumerary impacted teeth and includes a discussion of the classification, diagnosis, and management of this difficult clinical entity.

Keywords: Multiple supernumerary, nonsyndrome, odontoma, open apex, tooth malformation

Introduction

Supernumerary teeth may be defined as any teeth or tooth substance in excess of the full complement of primary and permanent teeth. Multiple impacted supernumerary teeth are rare. Most cases are found in association with syndromes such as Gardner's syndrome, cleidocranial dysostosis, and cleft lip and palate.^[1-4] Supernumerary teeth may occur as single (76-86%), double (12-23%), or multiples (<1%), unilaterally or bilaterally, and in one or both jaws.^[5] They may occur in any region of the dental arch with a particular predilection for the premaxilla. The prevalence for nonsyndrome multiple supernumerary teeth is less than 1%, and the male-to-female ratio has been reported as 9:2.^[3,6,7] Hyperdontia with one to four supernumerary teeth may be localized in the upper anterior and molar region. Supernumerary teeth may lead to delayed eruption or noneruption, displacement of permanent teeth, resorption or malformation of adjacent roots, and cystic formation (rarely).^[4,7] A single case of multiple supernumerary teeth and odontoma in the maxilla in a 12-year-old female child and its treatment and the 2-year follow-up is presented here.

Case Report

A 12-year-old girl reported with a chief complaint of a missing tooth in the upper front region of the jaw. She had history of trauma at the age of one and a half months. Medical and family histories were noncontributory. The face appeared

bilaterally symmetrical. Lymph nodes were not palpable. An intra-oral examination revealed a conical tooth in the position of the right central incisor; the left central incisor was missing [Figure 1]. On palpation, bulging of the maxillary left canine vestibular and palatal region was appreciable. Radiographs showed three irregular masses of calcified tissue resembling teeth-like structures in the palate; they were inverted and the structure resembled the tooth showing single pulp space and had dilacerated roots [Figure 2]. The erupted tooth in place of 11 had a wide-open apex. The radiographic diagnosis of odontoma/supernumerary teeth and 21 absent was made. The surgical removal of impacted supernumerary teeth or odontoma, followed by esthetic rehabilitation was planned.

The surgical removal of the multiple calcified tissues in the maxilla was carried out under general anesthesia. The surgical site was prepared; exposure of the desired site was carried out by raising the labial and palatal flap. All the impacted calcified tissues were removed by the bone guttering technique [Figure 3]. Wound toileting was done and the flap was closed with an interrupted vicryl 3-0 suture material with an interrupted suturing technique. The wound healing was normal. Tooth specimens were sent for histopathology. A histopathological examination revealed that one calcified structure showed features of multiple pulp spaces and areas of active mineralization, and was diagnosed as a compound composite odontoma; other two teeth had normal histological features of a tooth and were termed as supernumerary teeth [Figure 4]. The conical tooth was restored to the shape of a central incisor and the left central incisor was replaced with a removable partial denture. The case was followed up for 2 years which showed good bone formation radiographically.

Discussion

It is rare to find multiple supernumerary teeth with no associated diseases or syndromes. Odontomas are classified under supernumerary according to the Howard classification.^[8] Compound odontomas are more common

Departments of Pedodontics and Preventive Dentistry, ¹Oral and Maxillofacial Surgery, ²Pathology and Microbiology, ITS Centre for Dental Studies and Research, Delhi-Meerut Road, Muradnagar, Ghaziabad, Uttar Pradesh, India

Correspondence: Dr. P. B. Sood, Department of Pedodontics and Preventive Dentistry, ITS Centre for Dental Studies and Research, Delhi-Meerut Road, Muradnagar, Ghaziabad – 201 206, Uttar Pradesh, India. E-mail: soodpb@yahoo.co.in

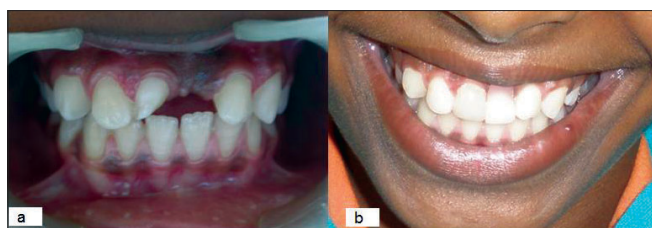


Figure 1: (a) Preoperative photograph; (b) postoperative photograph showing esthetic rehabilitation

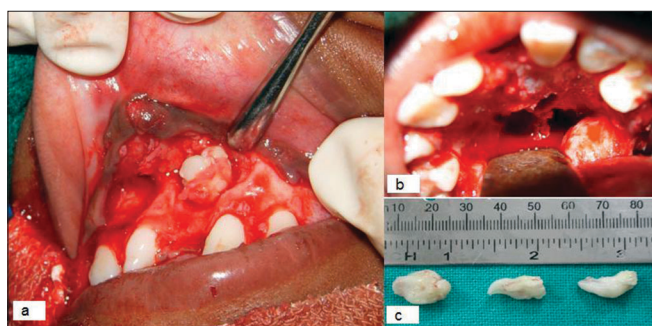


Figure 3: (a and b) Intra-operative photograph; photograph (a) showing cystic lining on the tooth specimen; (c) teeth specimen

and affect the anterior maxilla, and odontomas are associated mostly with permanent and rarely with deciduous teeth.^[9] The etiology is not completely understood. Several theories proposed include trauma and infection.^[10] Lopez Areal has concluded in his study that if injury occurs early in childhood it is more likely to form odontomas.^[11] Odontomas may be associated with cystic changes. Odontomas are treated by surgical enucleation and there is little possibility of recurrence.

Conclusion

As approximately 75% of supernumerary teeth are impacted and asymptomatic, most are diagnosed coincidentally during a radiographic examination. Early diagnosis is important to minimize the risk of complications resulting from supernumerary teeth.

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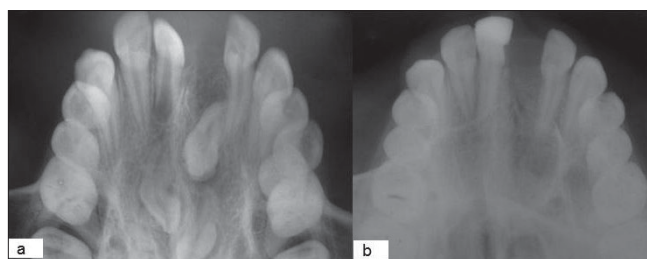


Figure 2: (a) Occlusal radiograph with calcified structures; (b) 2-year follow-up of the occlusal radiograph showing a complete healing process

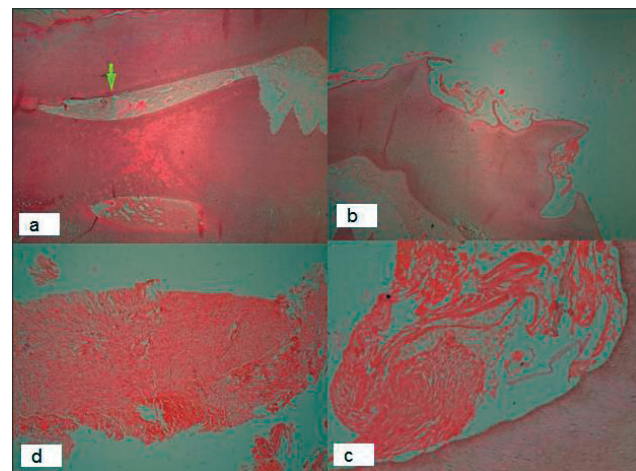


Figure 4: (a) Decalcified section of a tooth showing multiple pulp spaces in between showing a dentin-like material (H and E stain with 4x magnification); (b and c) cells showing odontogenic cell features probably reminiscent of ameloblast in close approximation to dentin (decalcified section: H and E stain, 4x and 40x magnification, respectively); (d) connective tissue capsule detached from the surrounding hard tissue (H and E stain, 10x magnification)

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