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Surgical Management of Twin Mesiodens: A Case Report

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Abstract

Supernumerary teeth are a common developmental anomaly which is characterized by the presence of extra teeth as comparison to the normal set of teeth. Mesiodens is the most common supernumerary teeth in the midline which is located in the premaxilla between the two central incisors. Mesiodentes is a not common condition when mesiodens erupt in multiples. The multiple etiological factors associated with its occurrence but the most accepted aetiology is the hyperactivity of the dental lamina. The prevalence ranges from 0.15% to 1.9%, with most commonly seen in male and in permanent dentition than in primary dentition. Mesiodens may be eumorphic, dysmorphic, single or multiple, impacted or erupted and can be inverted, placed labially, palatally or in between the maxillary central incisors, also syndromic or nonsyndromic. Complications associated with the presence of mesiodens may include crowding, delayed eruption, impaction, spacing abnormal root formation, a median diastema, cystic lesion, rotation, and root resorption of the adjacent tooth. Diagnosis is usually made by the clinical and radiological examination. To avoid complications associated with mesiodens, extraction is necessary. Here, we report a case of twin mesiodens, patient is a non-syndromic, present with the maxillary central incisors and affecting malocclusion.The present paper describes the case of two supernumerary teeth, one of which is the impacted in maxillary anterior region of jaw, impacted tooth removed surgically.

Index terms – Mesiodens, Supernumerary teeth, Surgery

Introduction

Supernumerary teeth is the condition of having extra teeth to the regular number of teeth. This developmental anomalies arise mainly in maxillary anterior region of jaw[1] and arise due to multiple etiology.[2] Prevalence of mesiodens teeth in general population ranges from 0.15 to 1.9% with higher occurrence in males than in female.[3]External appearance of mesiodens is conical and small than adjacent incisor. Supernumerary tooth is classified as the Paramolar, distomolar, mesiodens, paralateral, parapremolar and vertical, inverted, and transverse according to orientation.[4] Mesiodens is the most common supernumerary tooth according to the Alberti et al.[1] Multiple factors responsible for the aetiology of supernumerary tooth but etiology remains uncertain but few theories have been suggested.[5] It has been seen that the higher rate of occurrence of hyperdontia among related families which suggest that the genetic basis for supernumerary teeth.[6] In

syndromes such as the Gardner's syndrome and cleidocranial dysostosis presence of supernumerary teeth seen which confirms genetic basis of the disease.[7]'The complications like crowding, delayed eruption, impaction, spacing abnormal root formation, a median diastema, cystic lesion, rotation, and root resorption of the adjacent tooth, might occur due to the presence of the supernumerary tooth.'[8] It has been reported that the eruption of incisors in the nasal cavity.[9] Multiple complications arise due to presence of supernumerary teeth so its immediate removal is necessary in mixed dentition period.

In this article, we are including case report with surgical management of impacted mesiodens.

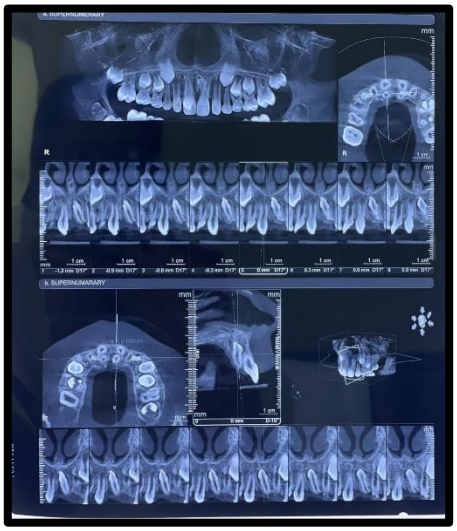
CASE DESCRIPTIONS

A 10-year-old male patient reported to the Department of Pediatric and Preventive dentistry, MGV's KBH Dental College and Hospital, Nashik with a chief complaint of an extra tooth which is placed upper front region of jaw. The parent of the patient noticed this tooth since 3 year. Clinical examination revealed that an extra tooth was present in on palatal aspect of 21 suggestive of a mesiodens. IOPA radiograph showed a tooth-like structure was found impacted in relation to the apical third of 11 which is in inverted direction suggestive of mesiodens also reveals mesiodens on palatal aspect of 12. To determine the position of mesiodens, CBCT was advised and was located palatally. (Fig 1b) Surgical extraction of the mesiodens was planned under local anesthesia for that blood investigation done. Mesiodens which was visible on the oral cavity was extracted first. The palatal flap was elevated, (Fig 2a) and selective removal of the palatal bone by using bur, the supernumerary tooth was exposed and was extracted. The flaps were sutured and post-operative instructions was given. Suture removed after 7th day. Follow up after 3 weeks. (Fig 3b)

Fig. 1(a)

Pre- operative intraoral photograph of Maxillary Arch

Fig 1(b)



CBCT taken of Maxillary Arch

Fig 2 (a)

Flap elevated

Fig 2(b)

Extracted twin mesiodens

Fig. 3 (a)

Post- Operative radiograph

Fig. 3(b)

Three week follow up

DISCUSSION

The diagnosis and management of the supernumerary tooth is not a difficult one. Most of the times diagnosis is accidental when it is impacted and the management is also difficult because positional and structural relationship of the supernumerary tooth with the adjacent tooth. We took intraoral radiograph and it gives us a preliminary assessment, newer imaging modality like CBCT reveals the more accurate positioning and spatial relationship of the structure.so, case described above needed CBCT scanning because the conventional radiographs were inconclusive of bone covering, depth of impacted teeth, distance between supernumerary teeth and nasal floor.

'The presence of multiple supernumerary teeth is usually associated with syndromes like Gardner's syndrome and cleidocranial dysplasia.' [10] In the case presented here, had multiple supernumerary teeth. However, the patients were non-syndromic.

Management protocol of supernumerary teeth be determined by on the type and position of the tooth. Immediate treatment of supernumerary teeth is usually indicated when there is inhibition or delay of eruption, displacement of the adjacent tooth, interference with orthodontic appliances, presence of pathologic condition, or spontaneous eruption of the supernumerary tooth. "Munns stated that "earlier the mesiodens is removed, the better the prognosis".[11]

In the above case, surgical extraction of the supernumerary teeth was done. We faced some difficulties in the surgical removal in the case. The impacted supernumerary tooth was in an inverted position, which made it difficult to locate during its surgical removal.

In our case no any post-operative complication occurs. A precise diagnosis and multidisciplinary approach are necessary to get good treatment results with fewer complications.

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