

## Supernumerary Teeth Management in the Anterior Maxilla: A Report of Two Cases

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### Abstract

### Case Report

**Introduction:** Supernumerary teeth are additional teeth besides the normal series causing interference to the developing permanent incisors and resulting in poor dental and facial esthetics. Many complications can be associated with these supernumerary teeth such as impaction, delayed eruption or ectopic eruption of adjacent teeth, crowding or the development of median diastema. **Aim:** The aim of this work is to present two cases of Supernumerary teeth treated in the dental department of Farhat Hached teaching Hospital in Sousse. **Résultats et discussion:** Two male patients aged 12 and 8 respectively were referred to the dental department of Farhat Hached Hospital due to swelling in their maxilla and delayed eruption of central incisors. The intra-oral examination showed the absence of the left central incisor for the first patient and an ectopic erupted one in the second patient. Upon radiological examination, impacted supernumerary teeth with partial root development were found. Both supernumerary teeth in both patients impeded the eruption of their central incisors and were surgically removed. The prevalence of supernumerary teeth in Caucasians has been reported to be between 1% and 3% which is slightly higher than the Asian populations. Single tooth hyperdontia was found in approximately 76% to 86% of the cases. Although supernumerary teeth could erupt normally, they may remain impacted. The most common complication of supernumerary teeth is maxillary incisors eruption failure. Early diagnosis and treatment of patients with supernumerary teeth may prevent or minimize complications. The treatment options depend on the supernumerary teeth type and position. Orthodontic treatment is often necessary to achieve optimum occlusal and aesthetic results. The disadvantage of the combined surgical/orthodontic therapy is that it requires a longer treatment period and some complication including ankylosis, non-vital pulps and root resorptions.

**Keywords:** Supernumerary tooth, mesiodens, management, malocclusion/therapy.

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## INTRODUCTION

Supernumerary teeth are additional teeth besides the normal series causing interference to the developing permanent teeth and resulting in poor dental and facial esthetics. The term mesiodens denotes a supernumerary tooth located between the maxillary central incisors (Sykaras, 1975).

Their incidence is higher in the maxillary incisor region followed by maxillary third molar and mandibular molar, premolar, canine and lateral incisors regions [1].

Many complications could be associated with these supernumerary teeth such as impaction, delayed

or ectopic eruption of adjacent teeth, crowding and the development of median diastema [2].

The diagnosis and management of supernumerary teeth is crucial to young patients 'developing dentition.

The aim of this work is to report 2 cases of non-syndromic maxillary supernumerary teeth in two young male patients with a chief complaint delayed eruption of permanent incisors with focus on clinical and radiological features and management strategies.

### Case 1

An 11-year-old boy reported to the dental department of Farhat Hached teaching Hospital Tunisia

for a routine dental check-up. He was concerned about the delayed eruption of his left central incisor in the upper arch. He had no history of pain nor any relevant medical or dental history. Upon further questioning his mother disclosed the normal eruption pattern of the permanent upper right incisor and lower central incisors which was in accordance with his chronological age.

Intra-oral examination revealed a partially erupted ectopic left permanent central incisor. The intraoral view is shown in Figure 1.

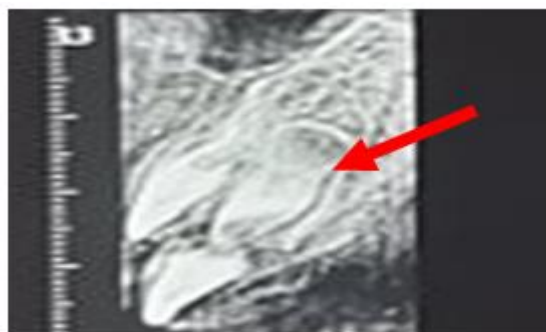


**Fig 1: An intra-oral photograph showing the partially erupted left incisor with a diastema between the right central incisor and the left lateral incisor**

Further investigations included a panoramic radiograph and confirmed the presence of supernumerary teeth on the upper left central incisor region. A CBCT scan was performed and showed its exact localization (Figure 2).



**Fig 2A: CBCT scan panoramic reconstruction showing the presence of a supernumerary teeth in the anterior maxillary region**



**Fig 2B: A cross sectional CBCT scan showing the exact localization of the supernumerary tooth. The tooth is in a palatal to the partially erupted left central incisor**

Surgical removal of the supernumerary teeth was indicated. An inta-sulcular incision was performed and an a full thickness flap was raised to extract the retained tooth. The surgery was done with bone removal under saline irrigation (Figure 3).



**Fig 3A: An intra-oral photograph showing the raised palatal flap**



**Fig 3B: An intra-oral photograph showing the empty socket after the extraction of the supernumerary tooth**



**Fig 3C: An immediate post operative view showing the repositioned palatal flap by simple sutures**

Wound healing was satisfactory, seven days post-surgery (Figure 4).



**Fig 4: Seven day post operative view showing satisfactory bone healing**

**Case 2**

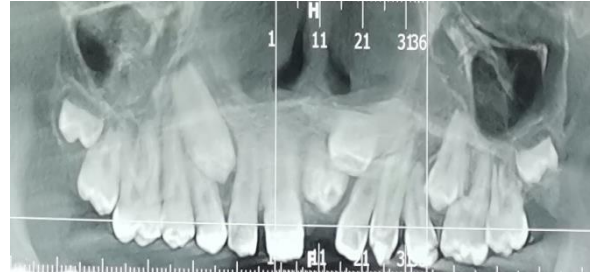
A 13 -year-old boy was referred to the dental department of Farhat Hached teaching Hospital Tunisia by his orthodontist. He was concerned about his partially erupted anterior left incisor in the upper arch. He had no history of pain nor any relevant medical or dental history.

Clinical examination revealed the absence of the maxillary central permanent left incisor 21, the absence of the upper right permanent canine 13 and the absence of the of the upper left permanent premolar 25 (Figure 5).

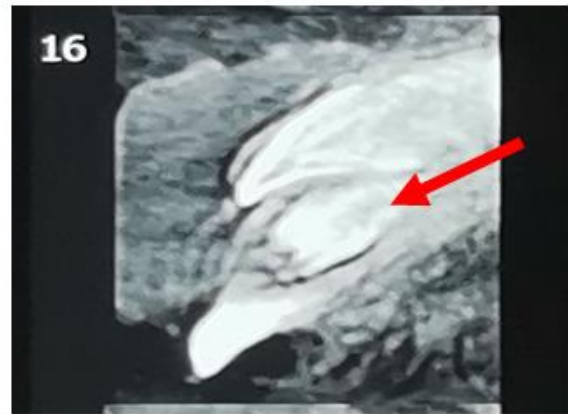


**Fig 5: An intra-oral photograph showing a large diastema between the right central incisor and the left lateral incisor**

Further investigations included a panoramic radiograph that confirmed the presence of a supernumerary teeth on the upper left central incisor region, a retained upper right canine and left premolar (Figure 6).



**Fig 6A: Panoramic CBCT scan panoramic reconstruction showing the presence of a supernumerary teeth in the anterior maxillary region**



**Fig 6B: A CBCT scan showing the position of the supernumerary tooth. The tooth is in a palatal to the partially erupted left central incisor**

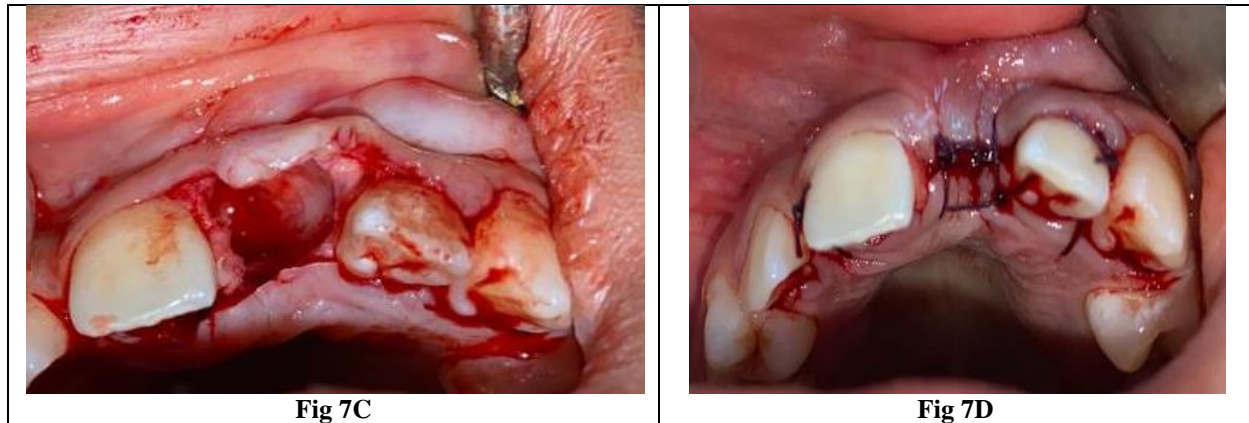
The surgical approach was similar to the one performed in the first case report (Figure 7).



**Fig 7A**



**Fig 7B**



**Figures 7 ABCD: Intra-oral radiographs showing the surgical approach used for the removal of the supernumerary tooth**

Wound healing was satisfactory, one week postsurgery.

## DISCUSSION

The prevalence of supernumerary permanent teeth is approximately between 0.15% and 1.9% in the general population and it is reported to be more common in males rather than females [3].

Mesiodens has been considered as the most common dental abnormality in permanent dentition [4].

The etiology of supernumerary teeth remains unclear; however, Multiple theories were suggested to identify their possible etiology; Dichotomy of the tooth bud, dental lamina hyperactivity theory, atavism theory and hereditary and environmental factors [5].

Supernumerary teeth are hypothesized to have a genetic component. They may be seen as an isolated finding or as part of a syndrome, specially cleft lip and palate, cleidocranial dysostosis and Gardner's syndrome [6].

Clinical complications such as midline displacement, diastema, delayed or failure of eruption, rotations, and impaction of teeth might lead to the Identification and localization of ST

It is essential to identify the presence of supernumerary teeth clinically and radiographically before a definitive diagnosis and eventual surgical treatment.

An anterior occlusal or periapical radiograph with paralleling technique or panoramic radiograph are the most useful radiographic investigations used to visualize supernumerary teeth Panoramic radiographs alone are reported to be not useful for the identification and management of ST. Computed tomography has also been used to detect the presence of supernumerary teeth helping to figure out the exact positioning of the ST. ..It has also been reported that combination of radiographs

is mandatory to access the supernumerary tooth's exact position prior to the surgical intervention [7].

## CONCLUSION

The clinician's knowledge of common anomalies and their location in the primary and permanent dentition results in early diagnosis and may prevent further complications.

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