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## Multiple supernumerary teeth causing permanent tooth impaction: A case report

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### Abstract

Supernumerary teeth are stemmatological anomalies where teeth exist in excess number to the normal dental count. It can develop in any location of the mandible or maxilla and may have a significant impact on the developing dentition. This paper reviews the prevalence, etiology, classification and clinical characteristics of supernumerary teeth. A case report involving delayed eruption of central incisor due to the presence of four supernumerary tooth in that region is being outlined. Importance of careful evaluation of this phenomenon is discussed to avoid severe pathological sequelae such as non-eruption of permanent teeth, cyst or tumor formation.

**Keywords:** Supernumerary teeth, impacted teeth, conical shaped teeth, inverted teeth

### Introduction

Multiple supernumerary teeth or hyperdontia in a non-syndromic patient is a rare condition [3]. It refers to excess number in addition to already existing permanent tooth structure. Supernumerary teeth are topographically classified as mesiodens, para premolar, para molar, distomolar and morphologically as conical, tuberculate, supplemental, odontoma [3, 4]. Supernumerary teeth are common in both upper and lower arch, unilaterally or bilaterally [5].

### Case presentation

A 15-year-old male patient visited our Oral Medicine and Radiology Department with chief complaint of irregularly placed upper front teeth region for the past 3 years. He had no relevant medical history. On clinical examination no syndromic abnormalities were detected. Intra oral examination showed missing 11, supernumerary tooth in relation to 11 and palatally placed 22 (Figure 1), giving an unesthetic appearance.



**Fig 1:** Clinical picture of the patient showing the absence of 11 and the presence of supernumerary tooth between 12, 21 and behind 21, 22 region

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**Occlusal radiograph**

Revealed four multiple tooth like structures with small crown and root portion (Figure 2). A tooth like structure (s4) was evident in the palate close to the medial aspect of the

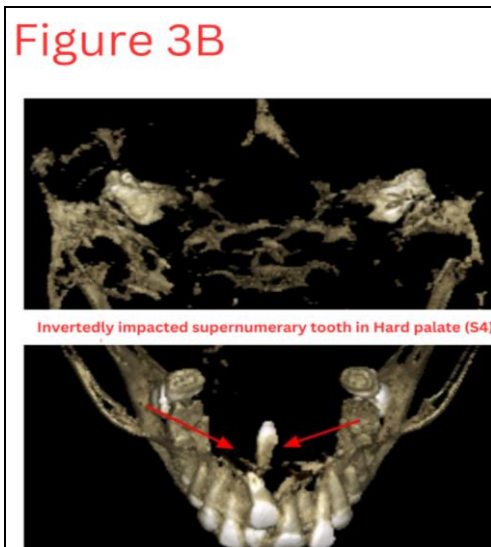
midpalatine raphe impinging on the root portion of impacted 11 tooth. A tooth (s2) was present palatally next to 21 tooth and tooth (s3) was present between the impacted 11 and s2. A tooth (s1) was clinically visible.



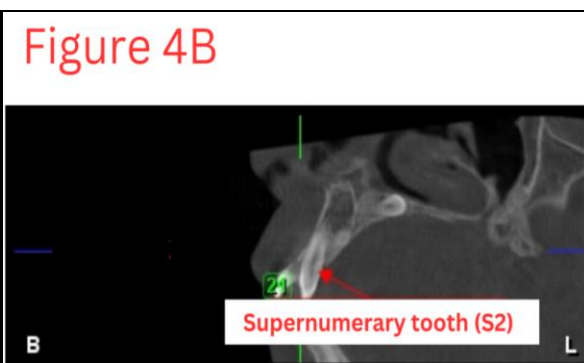
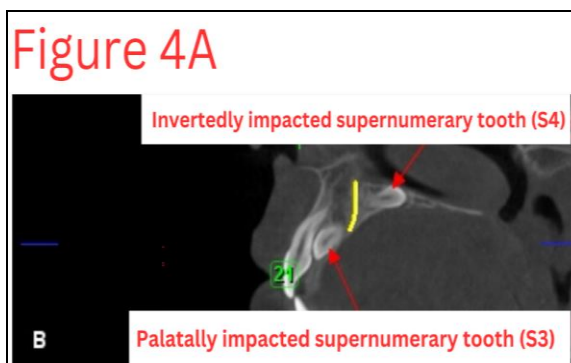
**Fig 2:** Occlusal radiograph of the patient showing the presence of 4 conically shaped supernumerary teeth (s1, s2, s3, s4) with impacted 11

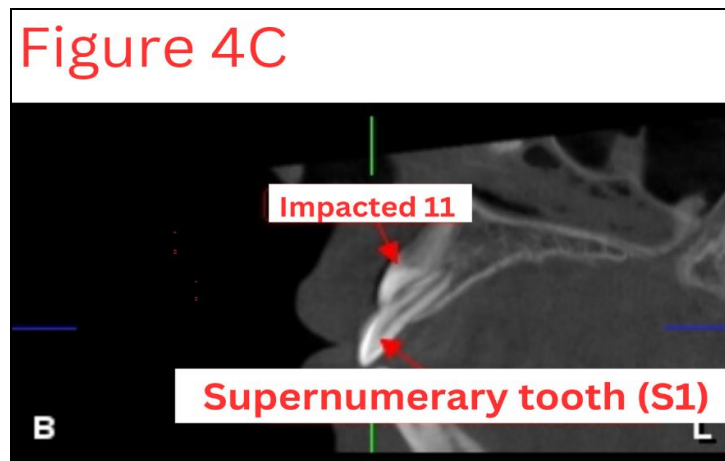
**CBCT assessment:** The patient had 29 permanent teeth. In the maxilla, four conically shaped supernumerary teeth were present medial to the 21 (S1) and behind the 21 region (S2). These two were clinically visible in 12 and 22 region. Impacted 11 (Figure 3A) root portion was impinged by

invertedly impacted supernumerary teeth (S4) in the palate (Figure 3B). Another Supernumerary teeth (S3) present between the impacted 11 and erupted 21 region (Figure 4A, B, C, 5). All teeth showed incomplete roots and no bony ankylosis, fusion or cyst formation were detected.

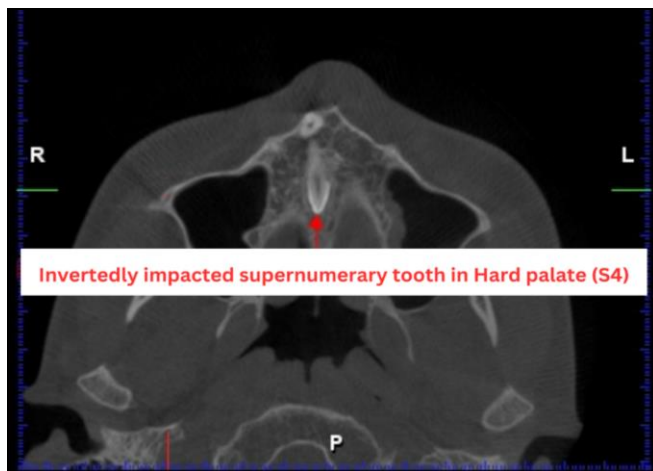


**Fig 3 A, B:** Transverse view of CBCT showing impacted 11 and invertedly impacted supernumerary tooth (s3)





**Fig 4 A, B, C:** Sagittal view of CBCT showing supernumerary tooth present palatally behind the 21 region (S2) invertedly impacted supernumerary tooth (S4) and palatally impacted supernumerary tooth (S3) impacted 11 and clinically present supernumerary tooth (s1)



**Fig 5:** Axial view of CBCT showing invertedly impacted supernumerary teeth (s3)

## Discussion

Supernumerary teeth well aligned in the arch are called supplementary tooth <sup>[1]</sup>, supernumerary teeth with abnormal shape or size are called rudimentary or dysmorphic. According to the research reports, single supernumerary teeth occurs in 72 to 77%, two supernumerary teeth in 18 to 27%, three supernumerary teeth in 1 to 5% of the cases <sup>[6]</sup>. Presence of more than 3 supernumerary teeth is a rare condition and hence this case is reported. The etiology of supernumerary teeth remains unclear while various theories have been postulated to explain how and why they develop. Various studies have claimed that they are the result of hyperactivity of the dental lamina where the epithelial cells that form supernumerary teeth remain for long periods. Usually, this condition is associated with syndromes like Gardner's Syndrome, Cleidocranial Dysplasia, Trichorhino Phalangic Syndrome, Cleft Lip and Palate <sup>[9, 1]</sup>, Down syndrome, Ehlers-Danlos syndrome, Fabry disease. Maxillary anteriors are most commonly occurring area followed by maxillary molars. 75% of the supernumerary teeth are impacted and asymptomatic. Here a non-syndromic patient with no symptoms of pain presented with 4 supernumerary teeth in maxillary region. Early diagnosis is important to minimize the complications resulting from supernumerary teeth. Most of the supernumerary teeth are presented with one or more of the following: crowding, delayed or prevented eruption of permanent teeth, adjacent teeth root resorption, dilacerations or abnormal root development of the permanent teeth

associated <sup>[6]</sup>. If any one of the conditions is seen, extracting the teeth is a treatment of choice. This patient presented with a complication of supernumerary teeth preventing the eruption of permanent teeth. In this case exact etiology was unknown and no familial occurrence of that condition was known. Three-dimensional imaging such as Cone Beam Computed Tomography (CBCT) aids in the exact localisation of the impacted supernumerary teeth and helps in predicting the prognosis of the eruption of permanent tooth in its place in the oral cavity.

## Conclusion

Extra teeth are less common but have numerous complications. Supernumerary teeth are accidentally identified during radiographic examination. The dentist should recognize the signs as early as possible to identify the proper diagnosis and to perform proper treatment.

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