



CASE REPORT

# Multiple maxillary and mandibular supernumerary teeth in twins: 5-year follow-up



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## KEYWORDS

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**Abstract** This is a case report of multiple supernumerary teeth of identical twins with 5 years of follow-up. The occurrence of supernumerary teeth in twins is an unusual event. This case report describes 7-year-old Taiwanese twin brothers who both presented with multiple supernumerary teeth in the premaxillary and mandibular premolar regions. The supernumerary premolars developed much later than the premaxillary supernumerary teeth in these twins. The supernumerary premolars caused impaction of the mandibular first premolars. Cases with multiple supernumerary teeth in twins are unusual, especially of supernumerary teeth affecting both the premaxilla and mandible. Such cases imply that heredity plays a role in the occurrence of supernumerary teeth.

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## Introduction

Teeth formed in excess of the normal number are termed supernumerary. Supernumerary teeth (STs) occur in 0.3%–3.8% of the population,<sup>1</sup> and, of these, 90%–98% occur in

the maxilla.<sup>1,2</sup> STs may occur singly, in multiples, unilaterally or bilaterally, and in the maxilla, mandible, or both. Maxilla midline supernumeraries (mesiodens) are the most common type, followed by maxillary lateral incisors, and mandibular third premolars.<sup>3</sup> The permanent dentition of males is affected approximately two to three times as frequently as females.<sup>4,5</sup> Approximately 25%–34% of STs are erupted, while the rest are unerupted.<sup>5,6</sup>

Heredity may play a role in the occurrence of this anomaly. Stafne, in a survey of 200 patients with

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supernumerary teeth, concluded that in 90% of his cases, there was a definite genetic influence.<sup>6</sup> Familial occurrence of STs was reported to involve more than one sibling<sup>7,8</sup> or one generation and may even skip a generation,<sup>9,10</sup> probably as an autosomal dominant gene with a lack of penetrance in some generations.<sup>8,11</sup>

Studies on dental anomalies of identical twins are highly significant, as they contribute information regarding interactions of genetics and the environment. Data regarding dental features in identical twins may contribute to a better understanding of interactions between genetic and environmental influences on dentition development.

The occurrence of supernumerary tooth in twins is therefore of interest, but there are only a few reported cases in the literature.<sup>12–17</sup> Cases with long-term follow-up have not yet been reported in the literature. Although there are many reports of bilateral STs,<sup>12–15</sup> cases with multiple STs in both the premaxillary and mandibular regions are rare, especially in monozygotic twins.

The purpose of this case report was to present a case of multiple maxillary and mandibular STs in monozygotic twin Taiwanese boys with long-term follow-up.

## Case report

This case report describes 7-year- and 7-month-old Taiwanese twin brothers who both presented with multiple STs of the premaxilla and mandible. The twin brothers had similar facial appearances with many shared physical features. The elder brother had visited the department of Pediatric Dentistry at Taichung Veterans General Hospital, Taiwan, when he was 7 years and 7 months of age, with the chief complaint of delayed eruption of the upper central incisors. He was a very healthy boy with no systemic disease or associated syndromes. His medical history was non-contributory, and there was no history of dental trauma. Clinical and radiographic examinations revealed he was in the early mixed dentition stage, and two impacted STs over the premaxillary region were noted: one was inverted, and the other was in a transverse position. Both were conical in shape (Fig. 1). The roots of these two impacted STs had completely formed, and the STs were on the palatal side of the normal central incisors. The two impacted STs over the premaxilla were removed under general anesthesia, the palatal flap was elevated, the bone was removed using a bur, and the two impacted STs were removed. Two upper incisors erupted 1 month after surgery. At the 1-month follow-up visit, the younger brother (aged 7 years and 8 months) visited our dental clinic for evaluation of STs. A clinical examination showed that he was also in the early mixed dentition stage. The upper left incisor had erupted, but the upper right central incisor was unerupted. Radiography revealed one impacted ST over the premaxillary region which was causing delayed eruption of the right central incisor. The impacted ST was in a transverse position and conical in shape (Fig. 2). Radiography revealed complete root formation of the impacted premaxillary ST. The impacted ST was removed under general anesthesia. The right central incisor erupted 4 months later (at age 8 years). At the 2-year follow-up visit (aged 9 years and 6 months), a panoramic radiograph revealed two impacted



**Figure 1** Two impacted premaxillary supernumerary teeth in the older brother.



**Figure 2** Impacted premaxillary supernumerary tooth in the younger twin.

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