

Bilateral double primary molars: case report

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Introduction

The finding of conjoined teeth has long been recognized,¹ with widespread disagreement over the most appropriate descriptive term for this anomaly. Recently, Yuen et al.² contended that when the etiology was not established, the term "double tooth" was more appropriate than terms such as fusion and gemination.

The anomaly has been reported to occur more frequently in the primary than in the permanent dentition.³ Additionally, the incidence in the primary dentition has been reported to differ among racial groups, with a range of 0.5–5.0%.⁴

The condition is seen predominantly in the incisor and canine regions and only rarely in the posterior dentition.⁵ In a study of 376 children, Yuen et al.² did not report any cases involving the primary molars. However, Winter⁶ reported on double primary molars as part of otodental syndrome. In this syndrome involving sensorineural hearing loss, the term "globodontia" has been used to describe the characteristic morphology of the dentition. The incisors typically are not affected, while the crowns of all molars and canines are enlarged, bulbous, and malformed with prominent lobules, particularly in the primary dentition. Additionally, the relation between cusps and major grooves is eliminated.⁷ Bilateral double primary incisors have been noted in patients with noncontributory medical histories,⁸ but the presence of bilateral double primary molars has been reported previously only in conjunction with otodental syndrome.

Case Report

H.E., a 5-year-old African-American male, presented for routine dental evaluation. His medical history was noncontributory. Systems review and medical record review revealed no pertinent positive findings.

Clinical Evaluation

Dental examination revealed the bilateral presence of unusually large tooth masses in the posterior maxilla, in the region normally occupied by the first and second primary molars. Despite the presence of vertical lingual and buccal grooves, there was no discernible separation of the involved teeth. Each of the large tooth masses exhibited three buccal and three lingual cusps and an occlusal morphology that was strongly suggestive of first and second primary molars (Fig 1). When each of



Fig 1. Occlusal view evidencing bilateral presence of double teeth.

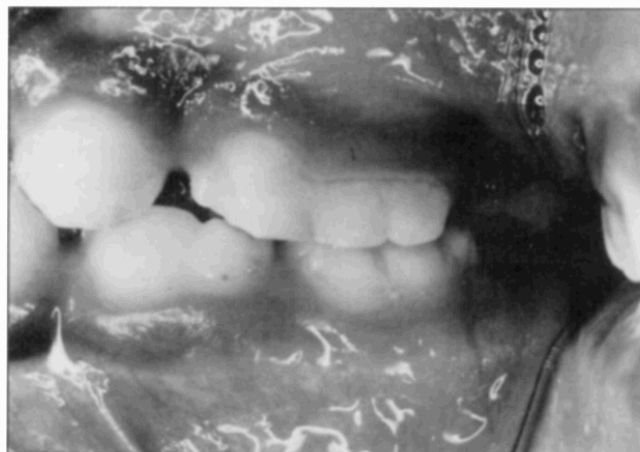


Fig 2. Buccal view demonstrating size and occlusal relationships.

the affected tooth masses was counted as a single tooth, the patient was seen to have two less teeth than the normal maxillary complement. The patient was caries-free, but had caries-susceptible grooves and poor oral hygiene, with cervical staining of the involved teeth.

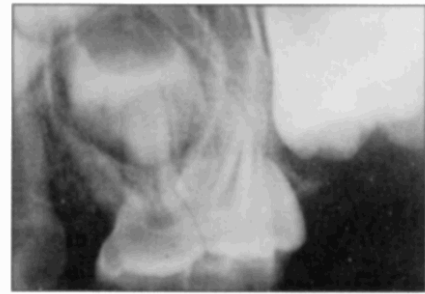
The patient exhibited a distal step primary molar relationship and a mesial step canine relationship (Fig 2). Midlines were coincident. Additionally, primate and antiprimate spaces were present in both arches.

Radiographic Evaluation

Periapical radiographs of the maxillary posterior regions revealed bilateral double primary molars with distinct vertical grooves that roughly approximated the external contours of the distal surfaces of maxillary first



Figs 3 and 4. Periapical radiographs revealing coronal and radicular morphology and presence of single premolar primordia.



primary molars (Figs 3 and 4). The number of roots and their morphology were difficult to assess with any degree of accuracy. There appeared to be a single pulp chamber in each large tooth mass with several pulp canals.

Bilateral single premolar primordia were evident in the maxilla. Although there were primordia of the first and second premolars in the mandible, there was no evidence of additional premolar primordia in the maxilla.

Discussion

The presence of double primary molars has been reported previously only in otodental syndrome. The bilateral occurrence in this patient was without this syndrome. Additionally, unlike the "globodontia" observed in otodental syndrome, the mandibular first and second primary molars and the primary canines were not affected. The occlusal morphology of the affected teeth was well defined and with evidence of cusp and major groove relations.

The most common concerns when double teeth are present are esthetic and functional. This is particularly true when double teeth exist in the anterior permanent dentition.⁹ The existence of double primary teeth associated with congenital absence of successor teeth may have deleterious effects on the developing occlusion. Although esthetics is not a concern in the case presented here, the developing occlusion most likely will reflect the observed anomaly. Although the patient's age does not allow us to conclusively rule out late calcification of a second premolar,¹⁰ it appears likely that only a single premolar is calcifying in each maxillary side. This would be consistent with the observations of Yuen et al.,² who noted a significant association of double primary teeth involving two adjacent teeth with anomalies in their permanent successors. The patient currently exhibits a distal step molar relationship, so absence of a second premolar in the maxilla compounds the potential discrepancy in permanent molar

relationships and function. The impact of having only a single maxillary premolar on the exfoliation of these large multirooted double teeth is not known, although delayed exfoliation may be anticipated. Inattention to the highly caries-susceptible grooves may result in rapid caries progression and premature loss of the affected tooth. Although the patient had no carious lesions, all caries-susceptible grooves of the double primary molars were sealed with a light cured resin.

Future treatment efforts warrant an interdisciplinary approach, including orthodontic and prosthetic management of residual spaces to ensure a functional occlusion.

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