Bilateral double teeth involving permanent mandibular molars

A double tooth is a developmental anomaly in which two teeth appear joined together. Such anomalies of tooth shape occur following disturbances in the morphodifferentiation stage of tooth development. Here we report a rare case of bilateral double teeth involving the permanent mandibular molars.

A 46-year-old woman presented with bilateral large teeth in the mandibular second molar region. Each of these teeth had two crowns resembling the molars that were united along the buccolingual surfaces (Fig. 1A). The tooth in the 37 region had a large amalgam filling and its fissures were stained brown—black (Fig. 1B), while the tooth in the 47 region was free from caries with two distinct crowns separated by a groove on the distal aspect (Fig. 1C). Teeth 38 and 48 were missing. The patient gave no history of previous extractions. Orthopantomograph and periapical radiographs were taken to evaluate the teeth of interest (Fig. 1D–F). The large teeth present bilaterally were diagnosed as double teeth.

Based on the pathogenesis, two types of double teeth exist: fusion and gemination. Fusion is the union of two separate developing teeth, whereas gemination is the partial development of two teeth from a single tooth bud. Differentiating the two anomalies may be difficult and may require careful clinical examination with radiographic projections at different angles for accurate diagnosis.

Figure 1  Clinical and radiographic photographs. (A) Bilateral large teeth involving mandibular molars. (B) Large tooth with amalgam filling in the left mandibular second molar region. (C) Large tooth in the right mandibular second molar region. (D) Orthopantomograph. (E) Periapical radiograph of the left side double teeth showing two crowns (white arrows) and an extra root (black arrow). (F) Periapical radiograph of the right side double teeth showing two crowns (white arrows) and an extra root (black arrow).
diagnosis. The number of teeth in the arch, the morphology, and the location of double teeth are all considered to discriminate the two anomalies. In fusion, the overall tooth count is less than normal, whereas in gemination it is more than normal. According to Ekambaram et al., gemination results in a bifid crown with each coronal half appearing as a mirror image, whereas fusion takes place at an angle causing the entire fused tooth to have a crooked appearance. Radiographically, geminated teeth usually have a single pulp chamber with normal root and canal morphology, whereas fused teeth have separate pulp chambers and root canals. Gemination presents predominantly in the maxillary anterior teeth, whereas fusion commonly occurs in the mandibular anterior teeth.3

In our patient, the large teeth in the 37 and 47 regions had two asymmetrical crowns. The routine orthopantomograph showed normal pulp chamber and root morphology, but periapical radiographs showed overlapping extra crowns (white arrows) and roots (black arrows) in both double teeth (Fig. 1). Considering the absence of the third molar teeth and the morphology of the double teeth, we came to a conclusion of bilateral fusion. The double teeth appeared as two teeth fused along the buccolingual aspect, rather than an incomplete splitting of a tooth. In addition, root morphology is normal in gemination, unlike the double teeth presented here which had multiple roots. Based on these findings, the fusion could be between the mandibular second and third molars. However, another possibility is the fusion of second molars with supernumerary paramolars with concurrent congenitally missing wisdom teeth. Such bilateral presentations of double teeth and their occurrence in the posterior region are less common.1,4 A literature review showed only a few reported cases with bilateral presentation4,5 and to our knowledge this case is the first of its kind where mandibular molars were involved.

Treatment usually involves vigilant observation and periodic follow-up coupled with preventive measures to limit decay or periodontal problems that are usually difficult to treat. In our patient, the amalgam filling was replaced, fissures were treated conservatively with fissure sealants, and periodic follow-up was indicated.

Conflicts of interest

All contributing authors declare no conflicts of interest.

References


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