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TWO CASES OF UNUSUAL COMPLEX COMPOSITE ODONTOMES WITH WELL DEFINED CORONAL INDENTATION

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Complex composite odontomes are hamatomatous lesions that originate from aberrations of a normal or supernumerary tooth germ. They develop their complex form from multiple invaginations of the developing enamel organ at the bell stage of tooth development. The complex composite odontomes consist of a mass of irregularly arranged odontogenic hard and soft tissues that bear no morphologic similarity to even a rudimentary tooth. The mandibular molar region is the most frequent site of occurrence of these odontomes.

The literature reveals that, the complex odontomes are commonly associated with permanent teeth. However, the occurrence of indentation on an odontome or on any other odontogenic malformation is unusual and has no reference in the literature. The two cases of complex composite odontomes presented are therefore unique and unusual. The inferolateral surface of both odontomes showed a well-defined coronal indentation. The crown of the impacted third molar tooth was in total occlusion with this indentation. This article presents the clinical, radiographic, morphological and histopathological aspects of the two unusual cases of complex composite odontomes, both seen in 22 year old males. Ground and decalcified sections of both odontomes stained with haematoxylin and eosin, when viewed with the light microscope showed, enamel, dentine and cementum arranged in a haphazard manner. While polarizing light microscopy confirmed the irregular arrangement of the enamel, fluorescent light microscopy revealed bands of fluorescence depicting incremental lines. Scanning electron microscopic studies of the indentation showed microridges. Some microridges were disrupted. Lacunae were seen where the tip of the cusp of the tooth was in contact with the indentation.

The etiologic factors leading to the formation of odontomes are still unknown. However, environmental factors such as trauma and infection, interference in postnatal genetic control of tooth development and some hereditary factors play a considerable role. In the two cases presented, the odontomes were superior to fully formed third molar teeth. As the dental lamina was dividing into molar tooth germs an aberrant supernumerary development from the third molar tooth may have led to the formation of a complex mass of dental tissues. The formation of the odontome within what must have been a common follicle may have led to a close contact between the crown of the tooth and the developing odontome. Subsequently, the growth of the odontome may have been greater resulting in downward displacement of the tooth; whereas, the developing roots of the tooth may have pushed in the opposite direction. Thus formed impingement of the crown of the tooth on the odontome may have caused pressure and thereby initiating a process of remodeling of the odontome leading to the formation of an occlusal contact with the tooth.