

DENS INVAGINATUS (DENS IN DENTE): A MULTIDISCIPLINARY APPROACH. CASE REPORT

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Aim: The purpose of this report was to demonstrate how a multidisciplinary surgical and endodontic approach in this type of tooth anomaly, may improve the prognosis both functionally and aesthetically. Dens invaginatus is a developmental anomaly resulting from infolding of the surface of the tooth crown before calcification has occurred. Many mechanisms have been proposed as a cause of this phenomenon, including local delay in enamel formation, infolding of the enamel organ within the dental pulp and local external influences on the tooth germ, but the aetiology of dens in dente is still not entirely known. The most common teeth interested by this malformation are maxillary lateral incisors, sometimes it occurs bilaterally. Morphologically the malformation is classified in three types: Type I: An enamel-lined minor invagination occurring within the crown not extending beyond the amelocemental junction. Type II: An enamel-lined form that invades the root but remains confined as a blind sac. It may or not communicate with dental pulp. Type III: a form that penetrates through the root perforating at the apical area showing "a second foramen" in the apical or periodontal area. There is no immediate communication with the pulp. The invagination may be completely lined by enamel, but frequently cementum will be found lining the invagination. The invagination commonly communicates with the oral cavity, allowing the entry of irritants and microorganisms either to the pulpal tissue or to an area that is only separated from pulpal tissue by a thin layer of dentin or enamel. This continual admission of irritants and the consequent inflammation usually leads to necrosis of the adjacent pulpal tissue and induces a periodontal or apical abscess. Other reported sequels of undiagnosed and untreated invaginated teeth include cysts, delay eruption and internal resorption. Sometimes Dens in Dente is associated with dental anomalies like taurodontia, microdontia, supernumerary teeth, gemination, and dentinogenesis imperfecta. **Description and procedures:** A 24-year old male patient came to the Dental Clinic for aesthetic reasons. Intraoral examination disclosed the presence of a maxillary right lateral incisor with unusual morphological features. The crown of the tooth had a peg-shaped appearance. Radiological evaluation showed that a large periapical lesion existed corresponding to the area of the lateral incisor, and irregular root canal borders and an enamel-lined invagination extended through the root. A Type III Dens Invaginatus was diagnosed. The patient was invited to have a maxillary Dental Scan done that showed exactly the wideness of the bone loss. After several irrigations with 5% NaClO, the endodontic treatment was performed: Ca(OH)₂ was left in the root canal for one month and then Thermafil Obturators (Dentsply, Maillefer) were used for endodontic closure. After eight months, although the initial improvement, we decided for the surgical removal of the cysts and apicectomy of the tooth.

Conclusion: Dens invaginatus has an unpredictable root canals anatomy. For a good clinical outcome we need to associate the surgical approach with the endodontic treatment.

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