Case Report

TITLE: GESTANT ODONTOMA-A CASE REPORT

Abstract:
Dens Invaginatus (DI), commonly known as dens in dente, is a rare developmental malformation (frequency of 0.04-10%) of tooth that most commonly affects permanent maxillary lateral incisor. It can be clinically and radiographically diagnosed. It is an important dental anomaly due to the possible pulpal involvement. Here we present a case of dens in dente which occurred in left maxillary lateral incisor leading to formation of a periapical abscess.

Key Words: dens invaginatus, lateral incisor, dens in dente

Introduction
Dens Invaginatus (DI), commonly known as dens in dente, is a rare developmental malformation of tooth that most commonly affects permanent maxillary lateral incisor. It occurs with a frequency of 0.04-10%. [1] It can be detected clinically in a tooth with altered crown morphology. It is an important dental anomaly due to the possible pulpal involvement. Radiographically it appears as a radiopaque invagination, equal in density to enamel, extending from the cingulum into the root canal. [2] Treatment includes conservative restorative treatment, nonsurgical root canal treatment, endodontic surgery, intentional replantation, and extraction.

Case Report:
A 24 year old male patient reported to the Department of Oral Medicine and Radiology with the chief complaint of pain, swelling and pus discharge in upper front tooth region since two months. History of present illness revealed that two months back patient experienced intermittent pain and swelling in upper front tooth, few days later there was pus discharge from gums in the same tooth. Patient had consulted a dentist one month back and was prescribed antibiotics and analgesics. On taking medications the swelling subsided but recurring pain and pus discharge continued.

The past medical, dental and surgical history was unremarkable. Intraoral soft tissue examination revealed a draining sinus on labial gingiva in relation with left maxillary lateral incisor (22). The same tooth also had an altered morphology (picture 1) and was tender on percussion. The contralateral tooth i.e right maxillary lateral incisor was congenitally missing. Intraoral periapical radiograph of 22 (picture 2) was done and a radiopaque mass extending from enamel till half way to root was present surrounding the pulp. There was a well defined radiolucency at the apex of this tooth with discontinuity of lamina dura.

On basis of clinical and radiographic findings a final diagnosis of chronic periapical abscess in relation with left maxillary lateral incisor due to dens in dente was given and patient was referred to department of conservative dentistry for endodontic treatment of the same tooth.

Discussion
Dens invaginatus (DI), also known as "dens in dente", "dilated composite odontome" or "gestant odontoma", is a developmental anomaly resulting from invagination of a portion of the crown (enamel organ) during morphodifferentiation. The invagination ranges from a slight pitting (coronal type) to an anomaly occupying most of the crown and root (radicular type). While the coronal-type invagination is lined with enamel, the radicular-type invagination is lined with cementum.

There is a 3:1 female predilection. This condition exhibits a high degree of inheritance. The tooth most commonly affected is maxillary lateral incisors with a prevalence of 0.25-5.1% followed by central incisors, premolars, canines, and molars.
Although the cause of DI is still unknown and controversial, possible mechanisms cited are (1) abnormal pressure from the surrounding tissues, (2) rapid and aggressive proliferation of a part of the internal enamel epithelium invading the dental papilla, (3) local growth retardation, (4) invagination of the crown before calcification of the teeth, (4) infection and (5) genetic factors.[3]

Clinical examination may reveal a deep fissure or pit on the surface of an anterior tooth. If one tooth is affected, a contralateral tooth must also be checked. In our case the contralateral tooth i.e right maxillary lateral incisor was congenitally missing.

Oehlers has classified dens invaginatus into three types depending upon its extent. Type 1 are those cases in which invagination is enamel-lined and ends as a blind sac within the crown, in type 2 the invagination extends apically beyond the cemento-enamel junction, but does not cross it and in type 3 the invagination extends beyond the cemento-enamel junction, penetrates the surface of the root and a second apical foramen is evident.[4] In our case the invagination extended beyond the cemento-enamel junction hence it was classified as Type 3.

The invagination area is separated from the pulpal tissues with a thin layer of dentin and frequently communicates with the oral cavity, allowing the entry of irritants and microorganisms, which usually leads to dental caries or infection and necrosis of the pulpal tissue and then to periodontal or periapical abscess with continuous ingress. In our case it had resulted in pulpal involvement leading to periapical abscess. Sometimes this anomaly is commonly diagnosed as an incidental radiographic finding. Radiographically it appears as a radiopaque invagination, equal in density to enamel, extending from the cingulum into the root canal. The defects may vary in size and shape from a loop like, pear-shaped or slightly radiolucent structure to a severe form resembling a “tooth within a tooth”. [5]

If the radiographic appearance is unremarkable, pulp vitality testing should be performed. If the results suggest vital pulpal tissue, then the teeth should be restored to prevent the access of dens invaginatus to the oral environment.

Dens invaginatus may also present as a syndrome occurring in association with other odontogenic anomalies, such as peg shaped lateral incisors, dens evaginatus of posterior teeth, supernumerary teeth, congenitally missing teeth, and sensor neural hearing loss. It may also occur with other dental anomalies such as dentinogenesis imperfecta, gemination, taurodontism, microdontia, supernumerary teeth and short roots and with some medical-dental syndromes. The complex anatomy of invaginated teeth makes the treatment difficult. Treatment includes conservative restorative treatment, nonsurgical root canal treatment, endodontic surgery, intentional replantation, and extraction.

CONCLUSION

Dens Invaginatus is clinically significant due to the possibility of pulpal involvement, pulpitis, necrotic pulps and chronic periapical lesions causing symptoms of pain swelling and pus discharge which may cause the patient to seek dental treatment. As in our case the patient had periapical abscess secondary to dens in dente.

REFERENCES:

4) Dr. Arjun Das, Dr. Sivakumar K, A Case of Dens in Dente in Maxillary Lateral Incisor, JIADS 2010; 1(3)