



Hyperplastic Dental Follicle with Calcification- A Case Report

[PP: 05-08]

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Abstract:

Hyperplastic dental follicle is a rare lesion that is frequently confused with dentigerous cyst and odontogenic fibroma. The diagnosis should be achieved with a correlation of clinical, radiological and histopathological findings. We present such a case involving the right mandibular canine in a 14-year-old male patient

Keywords: *Hyperplastic Dental Follicle, Calcifications, Mandible, Unerupted Canine*

ARTICLE INFO The paper received on: **11/7/2019** Accepted after review on: **8/8/2019** Published on: **4/12/2019**

Cite this article as:

Rai, V., Ramalingam, K., Chawla, G & Bansal, S. (2019). Hyperplastic Dental Follicle with Calcification- A Case Report. *Case Reports in Odontology*. 6(2), 05-08. Retrieved from www.casereportsinodontology.org

1. Introduction

Hyperplastic dental follicle around an embedded tooth is an asymptomatic lesion occasionally showing slight swelling in the affected area. It is a rare condition characterized by multiple impacted teeth and enlarged dental follicles that contain abundant calcification and rests of odontogenic epithelium. It was first described by Sandler et al. but term Multiple Calcifying hyperplastic dental follicles was given by Gardner and Radden. Till date, eleven cases of MCHDF have been reported in the literature^[1].

In all of the reported cases, the patients were male and younger than 40 years. The impacted teeth were mostly third,

or second molar, canine, or second premolar teeth and they were associated with pericornal radiolucencies delineated by sclerotic borders^[2,3,4].

The purpose of the present report was to describe the clinical, radiographic and histopathological features of a case of the hyperplastic dental follicle with calcification.

2. Case Report

A 14-year-old male patient reported to the outpatient department for routine dental checkup. His medical and family history was non-contributory. Extra-oral examination did not reveal any abnormalities. Intraoral examination revealed retained mandibular right deciduous canine.



An orthopantomograph revealed horizontally impacted mandibular right canine associated with peri-coronal radiolucency extending beyond the cemento-enamel junction and no evidence of resorption on the adjacent teeth. (Figure 1). Dentigerous cyst was the provisional diagnosis.

Transalveolar extraction of the impacted tooth was carried out under local anesthesia and the extracted tooth along with the attached soft tissue was sent for histopathological examination.

The histopathological examination revealed H & E stained section shows fibrillar connective tissue containing plump fibroblasts along with fibrous areas with collagen bundles. Foci of mineralization are seen of varying sizes resembling acellular, homogenous, cementum-like or psammomatous classifications. The inactive odontogenic epithelium is seen as rests with in the stroma. There is also evidence of ciliated pseudostratified epithelium in one tissue section. Van -Gieson stained showed uniform staining of the connective tissue and the mineralization.

After correlating the histopathological features with radiographic findings, we arrived at the final diagnosis of the hyperplastic dental follicle with calcifications.

The patient is under regular follow up to rule out central odontogenic fibroma.

3. Discussion

Hyperplastic dental follicle (HDF) or Peri-follicle fibrosis is an unusual lesion often confused with odontogenic fibroma. Gardner clarified three similar lesions – Hyperplastic dental follicle with or without calcifications, Simple Odontogenic fibroma and Central Odontogenic fibroma (WHO type).^[5]

Most patients have been males with affliction of the mandible in the most cases^[3,4]. Our presentation also involved the mandible in a male individual.

Most patients were asymptomatic and affected unerupted posterior teeth. Most frequently impacted teeth are mandibular third molars, followed by maxillary canines, mandibular canines, premolars and incisors.^[5] Our case was also asymptomatic but involved mandibular canine.

A normal pericoronal radiolucency is considered to be in the range of 2 to 3 mm. Tooth impaction caused by HDF may be associated with defective tooth formation or other symptoms like amelogenesis imperfecta, rough hypoplastic type and gingival hyperplasia^[6].

There is no proposed mechanism to explain the formation of HDF. Several hypotheses include tooth impaction, formation of supernumerary teeth, chronic inflammation and general factors for multiple lesions. There is an inter-relationship between impaction for a long period and HDF.^[7]

HDF is composed of wavy collagen fibres with plump fibroblasts in the connective tissue. It may contain strands and rests of odontogenic epithelium. It can show a mass of densely or loosely arranged connective tissue. Sandler et al described Calcifying HDF that showed calcified materials in the connective tissue.^[5,7]

Calcification can be noted in one-third of dental follicles. Sometimes, it becomes difficult to differentiate it from odontogenic tumors especially when calcifications are present.^[8]

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Figures & Legends:

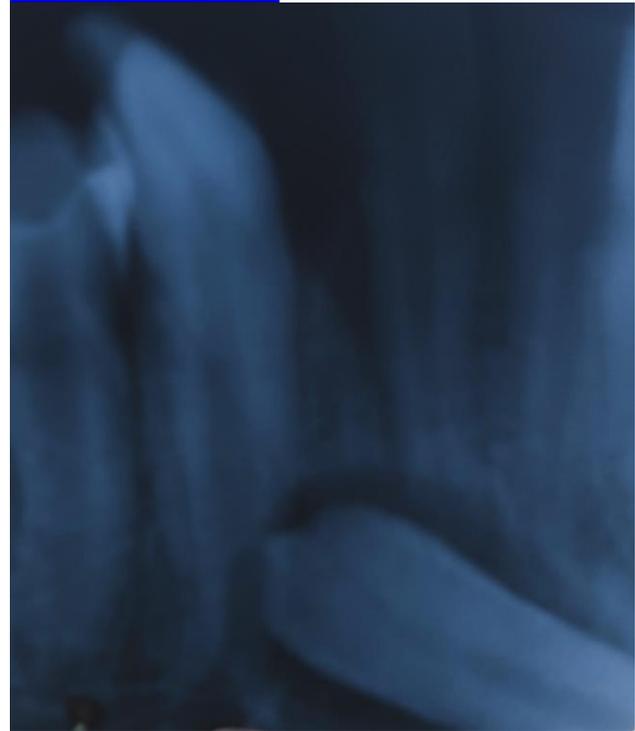


Figure 1: the orthopantomograph with periapical lesion in 42-44 region

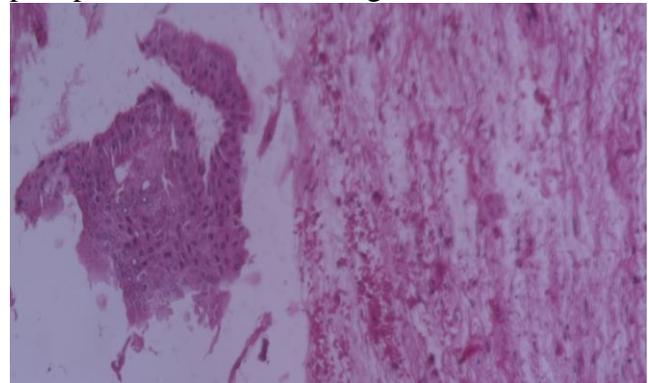


Figure 2: photomicrograph depicting cellular fibrous connective tissue stroma with irregular bony trabeculae (H & E 20x)

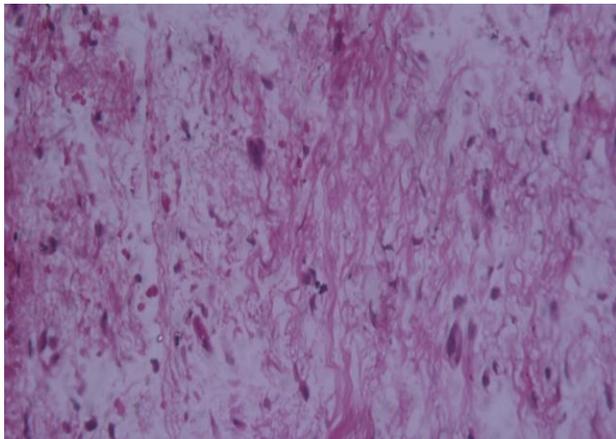


Figure 3: photomicrograph depicting amorphous mineralized deposits (H & E, 20x)