A Unique Case of a Giant Cell Fibroma in a Pediatric Patient

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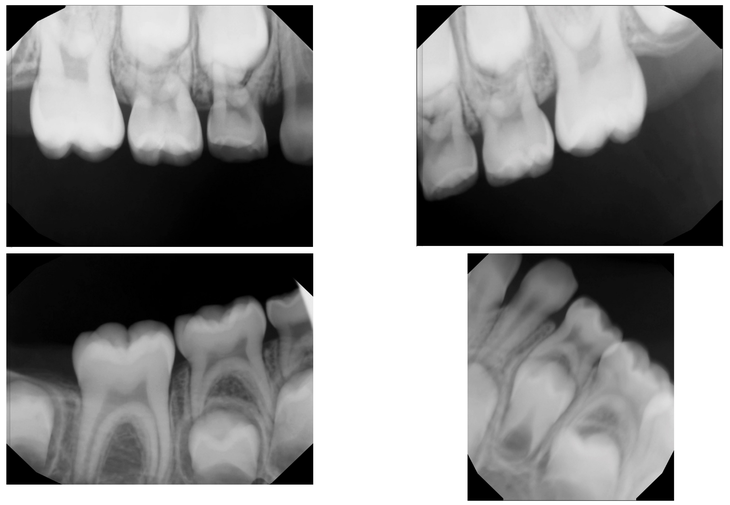
BACKGROUND

Giant cell fibromas (GCFs) are a type of benign neoplasm of mesenchymal origin that occur most commonly in individuals of Caucasian descent and in the second and third decades of life.[1] GCFs rarely affect children younger than 10 years old and do not display a sex predilection.[1] The lesion typically presents as asymptomatic, sessile or pedunculated and with a papillary surface.[1] GCFs usually display a normal, light pink color and are less than 1 centimeter in size.[2] About half of GCFs occur on the gingiva with the mandible (31%) having a larger predilection than the maxilla (19%).[2] The papillary surface of GCFs causes them to be frequently misdiagnosed for a papilloma.[3] The cause of GCFs is thought to be chronic irritation leading them to be reactive in nature and display changes in fibroblast cells.[3] Excisional biopsy is the treatment of choice and the reoccurrence rate is low.[3]

RADIOGRAPHS



TREATMENT/MANAGEMENT

The patient was reappointed back to Riley Children's Hospital Outpatient Dental Clinic for surgical excision of the lesion. An excisional biopsy under nitrous oxide and local anesthetic was performed with a laser in the dental chair. No sutures were placed. The lesion was placed in 10% formalin and sent to an oral pathologist for histologic analysis. Differential diagnoses consisted of papilloma, pyogenic granuloma, and giant cell fibroma.

The histologic analysis revealed a nodule of tissue with hyperplastic stratified squamous epithelium with elongated, thin rete ridges overlying dense connective tissue. Numerous stellate shaped fibroblasts were noted in the superficial lamina propria. These characteristics led to a diagnosis of a giant cell fibroma.

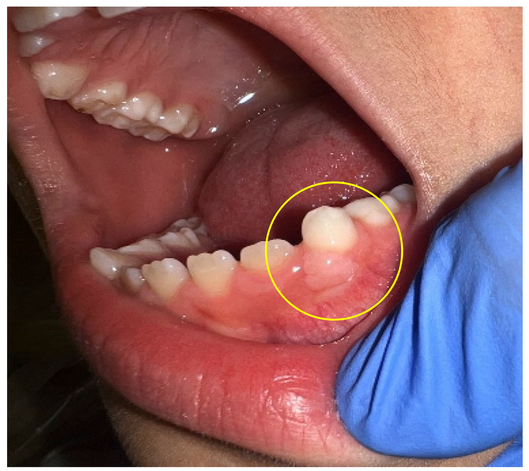
The patient recovered well from the procedure and was provided an appointment for a recall examination in six months and to evaluate the tissue where the biopsy was completed.

CLINICAL PRESENTATION

A 7-year-old male patient presented to the Riley Children's Hospital Outpatient Dental Clinic for a routine recall exam. His medical history was unremarkable. The patient had no current medications and only noted an allergy to Penicillin.

Four periapical radiographs were taken at the visit (due to the patient's inability to tolerate traditional bitewings). The extraoral exam was within normal limits, with no pathology present. The intraoral exam revealed an asymptomatic, papillary-like lesion on the gingiva near the lower left primary canine. No other abnormalities noted. Neither mom nor the patient reported noticing the lesion was present. The radiographic examination revealed no dental caries, and the patient was in mixed dentition. A treatment plan was proposed to address the lesion which included excisional biopsy with a laser for histological examination to determine the definitive diagnosis.

CLINICAL PHOTOGRAPH



An asymptomatic 3 mm x 3 mm normal tissue colored, sessile, papillary-like lesion on the mesial gingiva near the lower left primary canine.

HISTOLOGIC IMAGES

The histopathology of GCFs reveal an avascular fibrous connective tissue mass.[4] The stratified squamous epithelium displays elongated rete ridges with numerous giant cells.[4] Giant cells are stellate shaped and are rarely binucleated.[4]

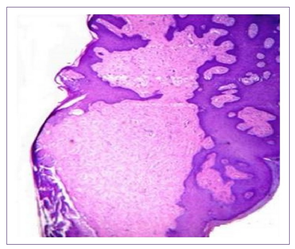


Figure A: Image displays stratified squamous epithelium with elongated rete ridges[4]

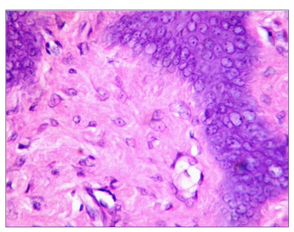


Figure B: Image displays several stellate shaped giant cells[4]

REFERENCES

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