

Case Report

Infected Radicular Cyst Mimicking Palatal Abscess: A Case Report

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Abstract:

One of the most common inflammatory odontogenic cyst affecting jaws is Radicular cyst. Anterior maxilla is most commonly affected and this entity is rarely seen in deciduous teeth and in adolescence. Here, we present a case report of radicular cyst mimicking palatal abscess in a 40 years old female. The patient management comprised of surgical enucleation of the lesion under local anesthesia followed by prosthetic rehabilitation of the same area. The sole goal of this article is to differentially diagnose radicular cysts and its early management.

Keywords: Radicular cyst, Palatal abscess, Peri-apical cyst, Enucleation.

Introduction:

A cyst is a pathological cavity having fluid, semi-fluid or

gaseous contents frequently but not always lined by epithelium. Radicular cyst also known as apical periodontal cyst and root end cyst comprises of 50-70 % of the cysts affecting the human jaws/dentition. The origin is from Epithelial Rests of Malassez in the periodontal ligament. They are commonly seen in fourth and fifth decade of life with male predominance. Usually they are seen in the entire tooth bearing areas of jaw but are seen commonly in maxillary then mandibular dentition, where there is a particularly high incidence in anterior teeth. Root canal treatment results in spontaneous healing of the radicular cyst but most authors suggests extraction of the tooth along with the removal of the cyst is the best line of treatment as reoccurrence is unlikely if removed completely. Improper or partial enucleation of radicular cyst results

in residual cyst.^[1-5]

Case report:

A patient named Smt. Kaila Devi 40 years old female reported to the department of Oral Medicine and Radiology, KD Dental College and Hospital, Mathura; with complain of swelling behind upper front teeth since 1½ years. Patient reported with complain of swelling behind upper front teeth since 1½ years. History revealed that patient noticed the swelling 1½ years back which was small initially small and gradually increased in size to attain the present size. Mild pain is present which is continuous in nature and is relieved only after medication. Patient also reported that pus discharged a week before for which she underwent drainage of swelling 3 days before reporting to the department. On Intraoral examination, a solitary, diffuse, ovoid swelling was noticed on the left side of hard palate crossing the midline. Anteriorly swelling extended 1cm posterior to the cervical region of teeth, posteriorly upto the posterior border of the hard palate, laterally 1 cm medial to the cervical area of teeth and medially crosses the midline. Skin over the swelling was normal in color with a breach in centre of swelling measuring app. 6 mm and measured about 3cm x 2cm (Fig-1). On palpation site and size were confirmed. Swelling was slightly tender, variable in consistency- hard areas were palpated on periphery with central soft area. Swelling was fixed, smooth. Swelling was compressible, non reducible, non pulsatile in nature. On the basis of history and clinical examination a provisional diagnosis of PALATAL ABSCESS in relation to 21, 22, and 23 was put forth with considering the following differential diagnosis- Periapical Granuloma, Periapical surgical defect, Periapical cementoma, Traumatic bone cyst, Periodontal abscess and Radicular cyst.

On investigatory procedures, electric pulp tester was used and 21, 22, 23 were found to be non vital. IOPA of 21, 22, 23, 24, 25, 26 region shows a round radiolucent, non corticated area surrounding the apical region of 21, 22, 23, 24 (Fig-2). Maxillary anterior occlusal radiograph reveals a round, non corticated radiolucent area surrounding the apex of 21, 22, 23, 24 and measures approximately 1.5x1.5 cm (Fig-3). OPG reveals a round, non corticated radiolucent area surrounding the apex of 21, 22, 23, 24 and measures approximately 1.5x1.5 cm, with a round corticated radiolucent area measuring 0.5x0.5 cm approx associated with the apex of root stumps 36 is seen. OPG also reveals missing 17, 45, 46, 47, root stumps of 35, 36 and carious 38.

3ml of yellow hazy fluid was aspirated during FNAC procedure. Microscopic examination showed fibrino-proteinaceous background fluid, trapping numerous neutrophils and some macrophages giving an impression of Odontogenic cyst. Excisional biopsy was performed in 21, 22, 23 region with extraction of involved teeth and enucleation of cyst (Fig-4), and 2 samples were obtained which were soft in consistency, reddish in color, measuring 1x0.5 and 2x0.7 cm approximately. The samples were sent to Oral pathology laboratory for histopathological findings. Microscopic feature shows cystic cavity (Fig-5) lined by stratified sq. epithelium & supported by connective tissue wall, epithelium of varying thickness was noticed and epithelium showed intense inflammatory cell infiltration throughout. In few areas epithelium was discontinuous. Supportive connective tissue stroma is made of parallel bundles of collagen fibres & in some areas inflammatory cell infiltration was seen. A histo-pathological diagnosis of Infected Radicular cyst was finally given.



Figure-1: Pre-operative intraoral view showing swelling on left side of hard palate



Figure-2: Shows round periapical non corticated radiolucency in relation to 21,22,23.



Figure-3: Shows round periapical non corticated radiolucency in relation to 21,22,23



Figure-4: Intraoperative view of enucleation of a cyst.

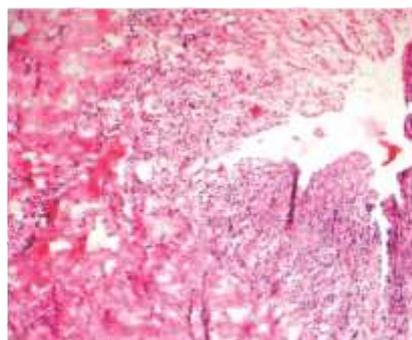


Figure-5: Shows histopathological features.

Discussion:

A cyst is a pathological cavity having fluid, semi-fluid or gaseous contents frequently but not always lined by epithelium.^[2] A radicular cyst also known as periapical cyst is usually associated with carious, non vital, discolored or fractured tooth or teeth.^[1,2] The origin is from epithelial rests of malassez in the periodontal ligament. They are commonly seen in fourth and fifth decade of life with male predominance. It is usually diagnosed on routine radiographs as radicular cyst remains symptomless clinically, unless it becomes sufficiently enlarged to cause expansion of the cortical plate or it becomes infected and expands in balloon like fashion. The rate of expansion has been estimated approximately 5mm in diameter per year. In maxilla, it is either buccal/labial or palatal cortical plate, which is expanded while in mandible it is usually the buccal/labial cortical plate which is expanded. The involved tooth (teeth) may exhibit mobility and the adjacent teeth may be displaced. On aspiration, it yields straw-colour fluid that shimmers with cholesterol crystals in light.^[1-5] Radiographically appears as well-defined round or oval unilocular radiolucency with radiopaque margin continuous with the lamina dura of the involved tooth but in case of infected cyst, the radiopaque margin on x-rays disappear because of rapid growth of the cyst. The roots of the adjacent teeth are usually displaced and roots of involved tooth are rarely resorbed.^[6,7] Many treatment modalities are available for radicular cyst like root canal treatment, extraction of involved tooth or teeth, enucleation with primary closure and marsupialisation followed by enucleation.^[1,2] In the present case extraction of involved teeth with surgical enucleation was done under local anaesthesia followed by prosthesis in the same

area.

Conclusion:

To conclude, radicular cyst usually go un noticed on routine oral examination as it rarely exceed palpable dimensions and is usually diagnosed on routine radiographs. As radicular cyst is a common odontogenic condition affecting oral cavity, routine OPG should be carried out for each and every patient. This case presents this common condition mimicking palatal abscess in female patient at common location.

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