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INFECTED RADICULAR CYST: A CASE REPORT

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ABSTRACT
Odontogenic cysts are classified into Inflammatory and Developmental types based on their ethology. Radicular cysts are of inflammatory origin arising from the epithelial cell rests of Mallasez in periodontal ligament. They are commonly seen at the apex of the tooth of a necrotic or inflamed pulp. The present case report shows a case of infected radicular cyst arising at the apex of the tooth. The lesion was surgically enucleated along with extraction of the involved teeth without any postoperative complications and satisfactory healing.

Keywords: Odontogenic, Cyst, Radicular

CASE REPORT:

A 32-year-old male patient reported to the Department of Oral Medicine and Radiology, D.Y patil Dental College and Hospital, Navi Mumbai, with chief complaint of pain in the lower right region of jaw since 3 days. Patient gives history of pain 15days back for the 1st time. The pain was mild & was relived on brushing teeth. Later the pain started again 3days back, which increased in intensity. The pain was continuous and lancinating in type & post that there has been no relief on medication since then. During examination, the patient was found to be in good health, conscious and co-operative.

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There is no history of trauma given by the patient. Extra-oral examination revealed no facial deformity. The right submandibular lymph node region was tender on palpaltion.

On Intra-oral examination prosthesis seen wrt 46, Single well defined, mild lingual cortical expansion seen wrt 47,48 measuring approx 1cm X 0.5 cm on the attached gingiva which was bony hard and tender on palpation (Figure 1). On Electric Pulp testing, 47 & 48 showed no response. All teeth were non-tender to percussion. Patient was already having an Orthopantomogram which revealed well defined osteolytic lesion measuring approximately 3 X 2cms in size extending from apex of root of 45 till distal aspect of 47 and endodontically treated wrt 46 with external root resorption (Figure 2) . Internal Structure of the lesion is completely radiolucent. CBVI small volume with FOV of 5 X 4 cms was taken on a Carestream 9600 machine at 120 Kvp and 6.3mA wrt 46 region. The scan revealed a completely hypodense expansile lesion measuring 42.3mm antero-medially and 9.8mm bunco-lingually. Lingual cortical plate expansion was noted along with the Inferior alveolar nerve canal being pushed inferiorly towards the lower border of the mandible (Figure 3). Based on the history, clinical examination and radiographic examination, , a clinical diagnosis of Infected Radicular cyst was given wrt 45,46,47 region was made and a treatment plan was formulated to manage the case surgically.

The patient was treated under local anaesthesia with extraction of 45, 46 and 47 & Surgical enucleation was done. An incision was made in the buccal region and a full thickness mucoperiosteal flap was reflected. Complete curettage with granulation tissue removal and enucleation of cystic lesion was done and it was sent for histopathological evaluation. 45,46 and 47 were extracted and the flap was closed. The patient was then put on antibiotics and analgesics post which a regular follow up was done for 6 months.

DISCUSSION

A Cyst is a pathological cavity may or may not be lined by epithelium. It can have fluid, semifluid or gaseous contents. In this case report, the cyst was formed in the right side of the mandible which was odontogenic in origin. There is release of toxic metabolites from the necrotic pulp which exit at the root apex causing inflammation of the surrounding structures and the PDL space resulting in an inflammatory condition.

Odontogenic cysts are most commonly found in the tooth bearing areas of maxilla or mandible. A Radicular cyst is most likely of inflammatory origin arising from cell rests of malassez. They are often associated with non-vital tooth.Cysts are usually with a well defined border either round or oval in shape usually present with a cortication. Unless if the cyst is secondarily infected, the margins will be more sclerotic and loss of cortication just as seen in this case report. In the present case, the radicular cyst was associated with a non vital, endodontically treated 1st molar. The

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cyst extended from 45 till 47 along with external root resorption seen which lead to the treatment plan of a surgical approach. The Radicular cysts are usually treated by conventional nonsurgical root canal therapy when lesion is localized or surgical treatment like enucleation, marsupialization or decompression when lesion is large. The histopathological reports were in alignment with the clinical diagnosis of a infected radicular cyst. The cystic cavity was lined by non-keratinised , stratified squamous cell epithelium with inflammatory infiltration.

CONCLUSION

The current case was successfully managed by surgical approach with enucleation and curettage and the patient has been kept under regular follow ups since last 6 months and shows no signs of recurrence. Highest incidence is seen in 3rd decade of life.

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Legends:

Figure 1: Single well defined, mild lingual cortical expansion seen wrt 47,48 measuring approx 1cm X 0.5 cm on the attached gingiva

Figure 2: Orthopantomogram revealed well defined osteolytic lesion measuring approximately 3 X 2cms in size extending from apex of root of 45 till distal aspect of 47.

Figure 3: Axial slice of Cone beer computed tomography shows completely hypodense expansile lesion.