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## **Radicular cyst associated with maxillary anterior tooth treated with conservative surgical approach: A case study**

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**Abstract**--Radicular cyst is that the most typical of all odontogenic cyst of the jaws and that they arise from the epithelial residues within the periodontal ligament after necrosis of the pulp as results of periapical periodontitis. A 15-year-old male patient reported to the department of oral and maxillofacial surgery with the chief complaint of broken tooth. 9 years ago, within the upper anterior region together with pain within the gums. Radiographic examination revealed a well corticated unilocular radiolucency with sclerotic border with relation to left maxillary central incisor. Because the patient belongs to a awfully young cohort, he was advised for complete enucleation of the cyst to scale back the post-operative complications.

**Keywords**---radicular cyst associated, maxillary anterior tooth treated, conservative surgical approach.

### Introduction

Radicular cyst is that the most typical inflammatory cystic lesion of the jaw. they're commonly found at the periapical area of the tooth and also lateral to accessory canal.it is formed by inflammatory proliferation of the epithelial remainder of malasessz . mainly caused by passageway infection. Quit often the cyst is remained within the jaw even after removal of tooth which is named as residual cyst.

### Case report

A 15-year-old male patient residing within the geographical region came to varsity with the chief complaint of broken tooth in upper tooth region and pain within the gums followed by incomplete opening of jaw for 4 days. The tooth was broken 9 years ago. No past medical record was present, the patient was of average height and weight. Extra examination showed no obvious swelling or facial asymmetry. No regional lymph nodes were palpable and no sinus or fistula seen extra- orally seen.



Figure 1 :- Pre-operative pictures

orthopantomogram (OPG) for radiographic evaluation. IOPA radiograph showed periapical radiolucency at the center one third with relevance 21, lamina dura obliterated at apical third of the basis also there was evidence of lateral resorption with regard to 11 OPG showed large well defined, well corticated unilocular radiolucency with sclerotic border with regard to 21.



Figure 2:-Pre-operative Radiograph (OPG)

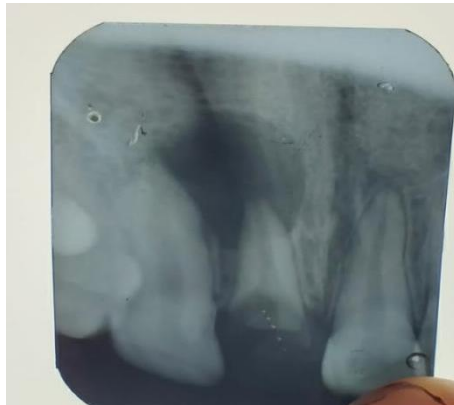


Figure 3:-Pre-operative radiograph (IOPA)

Considering history, clinical, radiographic findings provisional diagnosis was made as RADICULAR CYST. treatment of the subsequent case was as passageway treatment of the 11 and extraction of the foundation piece of 21 followed by surgical enucleation of the cyst. Surgical enucleation was done under anesthesia after obtaining consent from the patient Initially rubber dam was placed for correct isolation, disinfecting the realm with betadine scrub followed by passageway treatment of 11 was finished infraorbital nerve block and greater palatine nerve block. In RCT step back technique was used with apically 1 mm short gutta percha filling. Temporary restoration was given for 11 and extraction of the basis piece of 21 was done. The cystic cavity was drained followed by betadine wash was done. because the cystic cavity was large crevicular incision was made at the free gingival margin extending from distal of 11 to distal of twenty-two and slight flap elevation was finished complete visualization of the cystic cavity.

Enucleation of the complete cavity was finished the removal of the epithelial lining and debridement with betadine wash. The biopsy was sent for the histologic report. Once the removal of the cavity lining was confirmed interrupted suturing was through with non-resorbable suture material and therefore the patient was prescribed with antibiotics and analgesics followed by he was advised to keep up good oral hygiene.

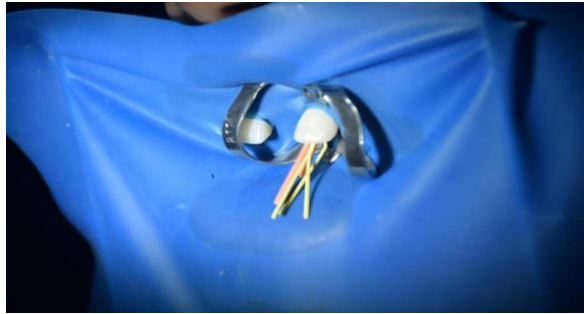


Figure 4:- Conservative treatment



Figure 5:- Enucleation of cystic cavity



Figure 6:- Complete removal of cystic lining



Figure 7:- Suturing done

Patient was recalled after every week to test for the healing and suture removal and so followed up after a month to test for the bone healing which was satisfactorily good. After 3 months follow up the patient showed up with good soft and hard tissue formation.



Figure 8:- Post-operative radiograph(OPG)

### Discussion

Cyst is defined because the pathological cavity that's usually lined by epithelium and which includes a centrifugal, expansive mode of growth. Radicular cyst is termed as fluid filled cavity arising from epithelial residues within the pdl ligaments as a consequence of inflammation, followed death of dental pulp. They are commonest of all the jaw cysts and comprise about 52% to 68% of all the cysts which affect the human Radicular cyst is typically asymptomatic and are mainly diagnosed accidentally during routine dental examination. Mostly found at the apices of the involved tooth or lateral to the accessory canal treatment for such is nonsurgical passageway with enucleation or marsupialization or decompression when lesion is large Marsupialization is typically preferred just in case of radicular cyst of primary teeth to preserve the vitality of unerupted successors, where a surgical window is formed by removing part of cystic lining to enable drainage of cystic content and loss of cystic pressure followed by which a pack is given to market reepithelization and to produce antimicrobial property. There are many treatment modalities. In our case, the patient was advised for complete enucleation of the cyst to cut back the post-operative complications as patient is of very young age bracket and reported to the oral surgery department for further management.

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