Case Report

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Surgical Management of Residual Cyst in Maxilla: A Case Report

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ABSTRACT

Background: Residual cyst is inflammatory type odontogenic cyst which is persisting in periapical region after extraction of tooth due to incomplete removable of granulation tissues or cyst. Majority of residual cyst is slow growing, asymptomatic and usually discovered on routine radiographic examination of an edentulous area. Residual cysts show more predilection in males and they commonly affect the maxillary region. We are presenting a case of residual cyst in a 54 year male patient with a chief complain of painless swelling with pus discharge from maxillary right third molar region. Clinical and radiographic feature with differential diagnosis and treatment have been discussed.

Keywords: Residual Cyst, Odontogenic Cyst, Periapical, Maxilla, Edentulous Area.

INTRODUCTION

Cyst is a pathological cavity filled with gas or fluids and lined by epithelium. Residual cyst is inflammatory type odontogenic cyst which is epithelial in origin. The epithelium arises from the enamel organ, the cell rests of Malassez, the reduced enamel epithelium or the remnants of the dental lamina. The epithelial rests can also cause the formation of a residual cyst after the extraction of a tooth (1). The location of all odontogenic cysts is usually intraosseous. The peripheral (extraosseous) presentations are rare (2). The possible causes of these cyst is incomplete removable of periapical granulation tissues or cyst after tooth removable. It is less commonly seen than in the radicular cyst. It is generally seen in maxilla of the elderly patients, typically in edentulous region with no sex predilection (3). Most of the cases residual cyst are asymptomatic and discovered in routine radiographic examinations but infected cyst may be show pain, swelling, pus discharge from the affected area and occasionally large cyst may be cause pathological fracture or displacement of adjacent tooth. Radiology showed a round to oval radiolucency of variable size within the tooth bearing regions of jaws at the site of a previous tooth extraction, as the cyst ages, degeneration of the cellular contents within the lumen occasionally leads to dystrophic calcifications and radiographic opacities (4).

CASE REPORT

A 54 yr male patient reported in department of oral and maxillofacial surgery with the chief complain of painless swelling and pus discharge from the maxillary right third molar region since 4-5 months after the extraction of 18 (FDI) from the outside clinic. Intra oral examination show the overlying mucosa was elevated, smooth and same color as that of adjacent mucosa without any sign of

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inflammation in edentulous region of 18 without any sinus opening or pus discharge. Swelling was non tender, soft, fluctuant in nature on palpation (Fig.1). Intraoral periapical radiograph showed a 1.5x1cm, well defined, unilocular, oval radiolucency in maxillary right 3rd molar region which is 5-6 mm away from the maxillary sinus lining (Fig.2). History of bidi smoking was present since 15-20 yr however no significant medical / drug allergy were present. A Fine niddle aspiration was revealed a 1.5ml yellowish viscous fluid (Fig.3). Under all the aseptic condition and precaution complete enucleation of cyst was done under local anesthesia (Fig.4&5). After enucleation, haemostasis was achieved and surgical site close with the help of 3-0 silk which is removed after seven post operative day (Fig 6&7). Post operative period was uneventful. Both FNAC and cystic lining was send for histo pathological examination, were infected residual cyst was diagnosed.

Fig 1: Shows elevated, smooth overlying mucosa in maxillary third molar region.

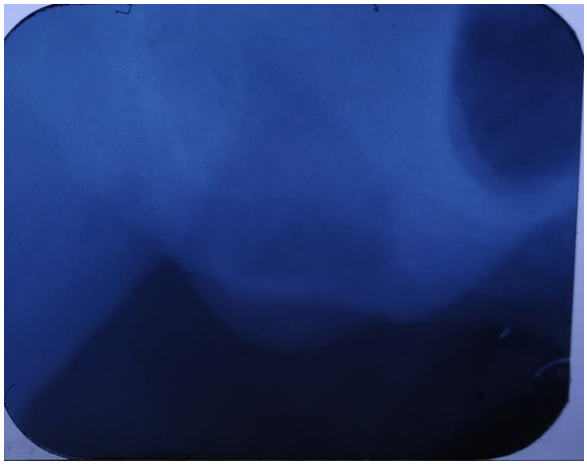

Fig 2: shows unilocular, oval radiolucency in IOPA, 5-6 mm away from sinus lining

Fig 3: Shows yellowish viscous fluid.

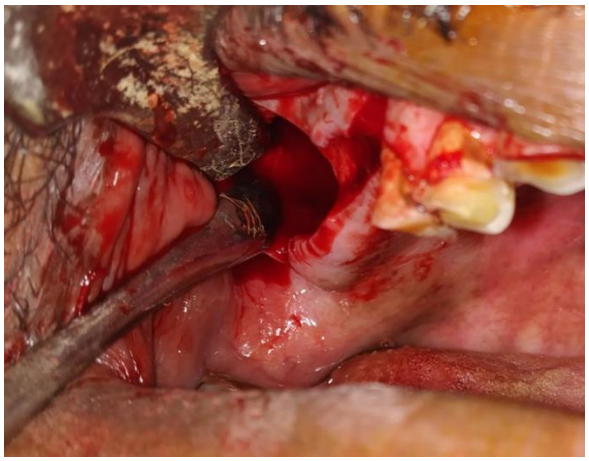

Fig 4: Shows enucleation of the cyst.

Fig 5: Shows cystic lining.

Fig 6: Shows closure of surgical site with 3-0 silk.

Fig 7: Shows healthy surgical site after suture removable on 7th post operative day.

DISCUSSION

Residual cyst is inflammatory cyst which is persisting in periapical region after extraction of tooth due to incomplete removable of granulation tissues or cyst. The term 'Residual cyst' is used by shafer el al for any cyst of the jaw that remained following surgery. It is odontogenic cyst which is epithelial in origin and represents approximately 10% of all odontogenic cysts (5, 6).

Majority of residual cyst is slow growing, asymptomatic and usually discovered on routine radiographic examination of an alveolar process and body of the jaw bones in edentulous areas, however there may be jaw expansion, pain, and pus discharge present in some case of secondary infection. Residual cyst occurs in both jaw but maxilla is more affected area than mandible and males are affected slightly more than females (7, 8, 9, 10). Trauma, carious tooth and infection are the most common cause of this cyst. Although differential diagnosis of residual cyst is Unicystic ameloblastoma, inflamed Odontogenic keratocyst, inflamed Glandular odontogenic keratocyst, inflamed Lateral periodontal cyst (4).

Radiographically, residual cyst appear as a well defined round to oval radiolucency with a distinct sclerotic margin in variable size within the tooth bearing regions of jaws at the site of a previous tooth extraction. In cases of longstanding lesions and in lesions with chronic inflammation, degeneration of the cellular contents within the lumen occasionally leads to dystrophic calcifications and radiographic opacities (4), these calcified masses are appeares in various size it may be barely perceptible, fine grains of radiopacities, to large, irregular particles that rarely cross diameter of 0.5 cm (11).

Residual cysts are slowly resolving lesions, but those that persist or increase in size are subjected to mechanisms which prolong the process. Due to the apparent thinness, the squamous epithelium lining the cyst can act as a semipermeable membrane and also continue to shed some cellular material into the lumen. Both these mechanisms could delay resolution (12).

Histopathologic examination show stratified squamous epithelium arranged in arcading pattern, lining the cystic space, in addition to slit like spaces which contained cholesterol clefts. The connective tissue wall showed foci of calcifications (9). Van der Waal et al., (13) reported the development of squamous cell carcinoma from three cases of residual cysts. The treatment of choice for residual cysts is surgical enucleation, along with removal of the lining of the cyst. The rate of recurrence is low. However, a regular follow up is needed, to rule out malignant transformation and recurrence.

CONCLUSION

Residual cyst is odntogenic inflammatory cyst which is persisting in periapical region after extraction of tooth due to incomplete removable of granulation tissues or cyst. It is therefore recommended a proper clinical, radiological, evaluation to analyze each case before performing a dental extraction to prevent the emergence of underlying cystic lesions. If we treated residual cyst a definitive diagnosis and treatment should be planned accordingly to residual cysts. A regular follow-up protocol should be established after giving appropriate treatment, to rule out any recurrence and malignant transformation.

CONFLICTS OF INTEREST

The authors declare they have no potential conflict of interests regarding this article.

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