Case Report

Palatal Radicular Cyst: A Case Report

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Abstract

Radicular cysts are inflammatory odontogenic cysts of tooth bearing areas of the jaws. It involves the apex of carious tooth. It is a true cyst, since the lesion consists of pathologic cavity lined by epithelium and is often fluid filled. The radicular cyst is the most common odontogenic cyst encountered in a dental clinic. It is the usual but not inevitable sequelae of the periapical granuloma originating as a result of bacterial infection and necrosis of the dental pulp, nearly always following carious involvement of the tooth. This case report deals with palatal radicular in thirty four year old male patient located over left palatal region managed with enucleation of the cyst.

Keywords: Radicular cyst, odontogenic cyst, enucleation.

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INTRODUCTION

Radicular cysts are the most common odontogenic cystic lesions of inflammatory origin affecting the jaws. They are commonly found at the apices of the involved teeth; however, they may also be found on the lateral aspects of the roots in relation to lateral accessory root canals.¹ They originate from an
epithelial rest of Malassez in periodontal ligaments secondary to inflammation.2 Most commonly, radicular cysts occur between the third and the sixth decade of life with male predominance. Clinically, the lesion is usually small, asymptomatic but may sometimes exhibit mild pain and sensitivity to percussion. The affected tooth is usually non-vital and the surrounding mucosa may exhibit bluish discolouration.3 Histopathologically, the radicular cyst is a chronic inflammatory lesion with a closed pathological cavity. It is lined either partially or completely by non-keratinised stratified squamous epithelium.2 Here is one such case of radicular cyst that presented as palatal swelling which was well managed through enucleation.

CASE REPORT

A 34-year old male patient reported to the Department of Oral and Maxillofacial Surgery in Maharaja Ganga Singh Dental College and Research centre, Sriganganagar with chief complaint of swelling for the last 13-14 years. Intraoral clinical examination revealed a round to oval swelling located over left palatal region of approximately 3 x4 cm extending from right maxillary central incisor to left maxillary first premolar region. On palpation the lesion was soft in consistency and non-tender. The occlusal and intraoral periapical radiograph showed large periapical radiolucency. Aspiration was performed and straw coloured fluid was obtained. On the basis of history and clinical findings, a provisional diagnosis of ‘Radicular Cyst’ was considered and the cyst enucleation was performed under local anesthesia. Specimen was sent for histopathological examination which confirmed the provisional diagnosis.

Figs. 1 – 6. 1,2). Pre-operative picture and radiograph. 3) During Aspiration. 4). Aspirated Fluid. 5). During Surgical Procedure. 6). Post Healing.
DISCUSSION

Inflammatory jaw cysts comprise a group of odontogenic lesions. They originate as epithelial residues in the periodontal ligament due to apical periodontitis following the death and necrosis of the dental pulp. Radicular cysts are diagnosed either during routine radiographic examination or following their acute exacerbation. Radicular cyst also known as periapical cyst, periodontal cyst, root end cyst or dental cyst, originates from epithelial cell rests of malassez in periodontal ligament as a result of inflammation due to pulp necrosis or trauma. Radicular cysts, with an incidence of 0.5-3.3% of the total number in both primary and permanent dentition. Occur more commonly between third and fifth decades, more common in males than in females, and more frequently found in the anterior maxilla than other parts of oral cavity.

Radicular cysts are usually asymptomatic and are left unnoticed, until they are detected by routine radiographic examination where as some long standing cases may undergo an acute exacerbation of the cystic lesion and develops signs and symptoms such as swelling, tooth mobility and displacement of unerupted tooth. Associated teeth are always non-vital and may show discoloration.

Histopathologically, radicular cysts are lined completely or in part by stratified squamous epithelium. These linings may be discontinuous in part and range in thickness from 1 to 50 cell layers. The lumen of a cyst contains fluid with low concentration of protein and collection of cholesterol clefts (Rushton bodies) with multinucleated giant cells. Different intensities of acute and chronic inflammatory infiltrate are present subepithelially.

The choice of treatment can be determined by some factors such as extension, evolution, origin, clinical characteristics of the lesion, cooperation and systemic condition of the patient. Treatment options for radicular cyst can be R.C.T. when lesion is localized or surgical treatment like enucleation, marsupialization or decompression when the lesion is large.

CONCLUSION

The current concept in the management of periapical cysts is non-surgical treatment but surgical management might be necessary for the successful treatment, depending on the size and extent of lesion. The current case was managed successfully by performing enucleation of the cyst.

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