

A Rare Case Report of Squamous Odontogenic Tumor

^{1*}Dr.Archana V, ²Dr.BijuBalakrishnan, ³Dr.JaesonMohananPainatt, ⁴Dr.

Jayachandran P

Post graduate student, Department of Periodontics, Amrita school of Dentistry, India

Reader, Department of Periodontics, Amrita school of Dentistry, India

Assistant Professor, Department of Oral and Maxillofacial Surgery, Amrita school of Dentistry, India

Head of Department {HOD}, Department Of Periodontics ,Amrita School of Dentistry, India

Corresponding Author: *Dr.Archana V

Abstract: The squamous odontogenic tumor (SOT) is a rare, benign, locally infiltrative neoplasm of the jaws that appears to originate from the rests of Malassez, gingival surface epithelium or from remnants of the dental lamina. The clinical presentation of the lesion is often asymptomatic, yet it can present with symptoms of pain and mobility of adjacent teeth... CBCT images show hypodense expansive lesions in between the left premolars. Excision of the lesion was performed and sent for microscopic analysis, which is distinguished by multiple islands of squamous epithelial cells surrounded by mature connective tissue stroma, consistent with the diagnosis of SOT.

Keywords: neoplasm, Squamous odontogenic tumor, squamous cells.

Date of Submission: 17 -08-2017

Date of acceptance: 13-09-2017

I. Introduction

Squamous odontogenic tumor (SOT) is a rare benign lesion which had been recognized as an apparent entity for a number of years until 1975, when Pullon et al first described it[1]. SOT is a benign but locally infiltrative neoplasm consisting of islands of well-differentiated squamous epithelium in a fibrous stroma. The epithelial islands occasionally show foci of central cystic degeneration.[2] and it is originated from the remnants of dental lamina, or of the cell rests of Malassez or gingival epithelium[3]. To date with, less than 50 cases have been reported till now. The most common site of SOT is in the mandible - bicuspid-molar region and in the maxilla, incisor-cuspid area. The characteristic feature of SOT in radiograph is unilocular and expansive triangular-shaped radiolucency of the alveolar bone, with its wide base between the diverging apices of the adjacent roots[4]. Histologically, the tumor is characterized by multiple islands of squamous epithelium surrounded by a mature connective tissue stroma. Occasionally, cystic degeneration or calcification is observed in the epithelial islands[5]. The routine treatment has been simple enucleation and recurrence has been rare[6]. The objective of this article is to report a clinical case of squamous odontogenic tumor in a 18 year old female patient.

II. Case report

A 18 year old female patient reported to the department of Periodontics, Amrita School of Dental Science, (AIMS) Kochi with a chief complaint of pain and bleeding gums from the left upper back tooth region since 2 weeks. The lesion was painful- moderate intensity and intermittent in nature with bleeding on provocation. Patient revealed a family history of her elder sister having Carcinoma tongue and has done partial glossectomy 2 months back. Patient reported with no medical history. On clinical examination a small confined soft tissue swelling measuring 1 X 1 was noticed interdentially on the palatal aspect between 24 and 25. The lesion was continuous with the marginal gingiva with bluish – pink in color and surface was smooth without any ulceration. On palpation swelling was soft in consistency, tender and on provocation bleed easily and food impaction was seen between 24 and 25 [Fig 1]. After the history and clinical examination an intra oral periapical radiograph was taken. Radiograph showed severe radiolucency between 24 and 25 with a thick sclerotic border at the base of the radiolucency. Based on clinical and radiographic finding initial diagnosis of localized periodontitis in relation to 24 and 25 was made [Fig 2].

Initially the lesion was treated with non surgical periodontal therapy and patient was recalled after one week. On examination there was no change in swelling and discomfort continued. The patient was advised to take an radio visual radiograph (RVG) and it showed a ovoid radiolucency between 24 and 25 [Fig 3]. CBCT was advised for further evaluation and it clearly showed a ovoid radiolucency measuring of 7.6 mm in length and 5.6 mm in width with displacement of roots of adjacent teeth [Fig 4]. Patient suspected with diagnosis of

radicular cyst and lateral periodontal cyst. Open flap surgery was done in the second quadrant and cyst enucleation was performed leaving a hollow bony defect. The enucleated tissue sent for biopsy and the site was sutured [Fig 5] . Patient recalled after 1 week for review. Biopsy report shows multiple islands of squamous epithelia cells surrounded by mature connective tissue stroma indicative of Squamous odontogenic tumor.

Fig -1 Clinical picture



Fig -2 Intra oral periapical radiograph btw 24 & 25



Fig-3 Radiovisual radiograph



Fig -4 CBCT



Fig- 5 Flap raised- defect is seen

III. Discussion

Squamous odontogenic tumors (SOT) arise from mesenchymal and epithelial tissue or both. The etiology of these lesions are not well understood. SOT can occur in wide range from 1st decade to 8th decade with a mean age of 32 years [8,9]. Clinical presentation of SOTs represented a slow growing, intrabony lesion with very few clinical signs and symptoms. Most common being mobility of adjacent teeth, swelling of alveolar process, and mild/moderate pain in the affected areas. Although not pathognomic, SOTs are detected in routine intraoral radiographs [10]. They present as a radiolucent, unilocular, triangular-shaped lesion with sclerotic margins associated with the roots of adjacent teeth. The tumor may be misdiagnosed as a severe periodontal defect in a normal film based radiograph. Differential diagnosis of radicular cyst and lateral periodontal cyst was included. Microscopically, SOTs show cellular fibrous connective tissue showing areas of hyalinization. Within the connective tissue there are numerous islands of odontogenic epithelium. These islands contain predominately squamous cells, rich in eosinophilic cytoplasm [11-12].

Local excision or enucleation remains the treatment of choice for SOT. Recurrence is attributed to incomplete removal of the initial lesion and rarely reported in literature. Among these six cases reviewed by Pullon *et al*, only a single case of recurrence was observed. [14]. In cases of recurrence, the extraction of adjacent teeth involved in the tumor is indicated [7-9,13].

IV. Conclusion:

The present article demonstrates the need for an effective clinical evaluation, use of advanced radiographic aids like digital radiography and CBCT and histopathological examination to help in accurate diagnosis of SOT, and providing appropriate treatment.

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*Dr. Archana V. "A Rare Case Report of Squamous Odontogenic Tumor." *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)* 16.9 (2017): 85-87