ABSTRACT

Radiographically traumatic bone cyst is manifested as a well-defined radiolucent area with a festooned pattern around the apices of the adjacent teeth. The exact etiology of the lesion is uncertain but the trauma has significant role. Routine radiographs play an important role in diagnosing this lesion. In most of the cases, the diagnosis is confirmed by finding an empty cavity during surgical management. Simple exploration of the cyst may be the curative procedure for this lesion.

Keywords: Traumatic bone cyst, Solitary bone cyst, Mandibular radiolucency, Curettage.


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INTRODUCTION

Posterior mandibular radiolucency always has remained a dilemma in oral and maxillofacial surgery setup both in terms of diagnosis and treatment. It may be of odontogenic or nonodontogenic origins with varying degrees of destructive potential. Most radiolucent lesions are often incidentally discovered on a plain radiographs, CT scan or MRI performed for other indications. They present with a wide range of pathologic features with similar imaging characteristics. Although, the diagnosis of these lesions is not always straightforward but the systematic diagnostic approach helps us to achieve a definite treatment plan.

Traumatic bone cyst was first coined by Lucas in 1929.1 In the literature it is known with diverse names like traumatic hemorrhagic cyst, progressive bone cavity, solitary bone cavity, solitary bone cyst, simple bone cyst, idiopathic bone cavity, unicameral bone cyst, hemorrhagic bone cyst, extravasation cysts, hemorrhagic cyst, hemorrhagic extravasation, solitary hemorrhagic cyst.1-3 Usually traumatic bone cyst is asymptomatic and appears as an incidental finding on routine radiographs. It is not a true cyst as it lacks epithelial lining. On surgical exploration it typically consists of an empty cavity in the bone with organizing granulation tissue and hemorrhage. Radiographically, it is unilocular radiolucent lesion with characteristic scalloped superior margin extending between roots of the teeth. Unusual cases may be multilocular and aggressive.4-6 Because of a lack of unique clinical and radiographic features, it is important to establish the differential diagnosis.
showed multiple areas of thinned out cortices both on buccal and lingual side involving inferior border of mandible up to the posterior border of ramus. It also showed superior displacement of inferior alveolar canal (Figs 3 and 4). Routine blood investigation was done and serum calcium and serum phosphorous levels were checked which was normal. On FNAC, scanty blood stained serosanguinous fluid with air and on explorative biopsy empty cavity with scarce granulation tissue was obtained (Fig. 5). Based on the history, clinical examination and investigations, provisional diagnosis was made as traumatic bone cyst. Differential diagnosis included aneurysmal bone cyst, ossifying fibroma, central giant cell granuloma, ameloblastic fibroma, odontogenic myxoma, pindborg tumor, brown’s tumor.

Treatment was planned, surgical exploration and curettage of the lesion under general anesthesia. Intraoperatively the cystic lesion presented with large empty marrow cavity with scanty organizing granulation tissue and hemorrhage. Complete curettage of the lesion and hemostasis was achieved and Bismuth iodide paraffin paste (BIPP) pack placed in the cavity and the defect was partially closed. Due to extensive lesion, intermaxillary fixation was done for 3 weeks to avoid pathological fracture. Patient was recalled every week and defect irrigated with normal saline and BIPP pack was replaced. Patient was advised to maintain good oral hygiene. After 1 month follow-up surgical site was completely closed and after 6 months orthopantomogram showed osseous regeneration suggesting resolving lesion (Fig. 6).

DISCUSSION

The WHO classification describes traumatic bone cyst (TBC) as an intraosseous pseudocyst devoid of an epithelial lining, either empty or filled with serous or sanguinous fluid.7,8

TBC is rarely symptomatic and is usually discovered accidentally. The prevalence of TBC is of 1% among the maxillomandibular cystic lesions.9 89% of the lesions are seen in posterior mandible while in maxilla only 11%.2 Most commonly it occurs in 2nd decade with no gender
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Treatment remains the surgical exploration, cochleation of the cavity in order to stimulate bleeding in the cavity. This is followed by organization of a clot, and healing by the formation of new bone. Some TBC heals spontaneously without any intervention. The larger ones’ are managed by curettage followed by application of gelfoam, grafting by allogenic bone with platelet-rich plasma and bone fragments. Injection of a mixture of blood, and hydroxyapatite are also reported to produce good results. The prognosis following surgical curettage is good and recurrence rate is extremely low that is less than 2%. In summary, TBC is pseudo cyst most commonly found in posterior mandible, lined by a connective tissue membrane containing blood mixed straw colored fluid sometimes air. Surgical exploration is the most common line of treatment and it shows a good prognosis. Although, appropriate diagnosis of the posterior mandibular radiolucency remains challenge, a systematic diagnostic approach and proper differential diagnosis helps us to provide suitable treatment to the lesion.

REFERENCES


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