

UNUSUAL PRESENTATION OF SOLITARY BONE CYST - A CASE REPORT

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Abstract:

Solitary bone cyst, also known as traumatic bone cyst or idiopathic bone cyst, is a bony cavity with no epithelial lining and no infection, containing fluid and small amounts of tissue. Clinically these lesions are usually asymptomatic and detected accidentally on routine radiographic examination. Normally, they are empty cavities sometimes having a thin lining of connective tissue without epithelium. They may contain serosanguinous fluid, clots, erythrocytes, fibrin and giant cells. In this report, we present a case of solitary bone cyst in the anterior mandible which was associated with pain.

Keywords: Solitary bone cyst, Traumatic bone cyst, bone cavity

Introduction:

Solitary bone cyst (SBC) is a non neoplastic lesion defined by the WHO as 'an intraosseous cyst having a tenuous lining of connective tissue with no epithelium.[1] Although known by many names such as simple bone cyst, hemorrhagic cyst, idiopathic bone cavity and unicameral bone cyst, the international histological classification of tumours by the WHO recommends use of the term 'solitary bone cyst.' [2] This rare pathology accounts for only 1% of maxillofacial cysts and tumours. [3]It is generally an accidental finding during routine radiographic examination.[3,4] In this report, we describe a case of solitary bone cyst which presented to us with pain in the mandibular anterior region.

Case Report :

A 32 years-old-male reported to the department of oral medicine and radiology with a complaint of pain in the mandibular anterior region since one month. The pain was mild in nature and only noticed on palpation. There was no history of trauma. Intraoral examination

revealed normal mucosa in the mandibular anterior region with no evidence of bone expansion labially or lingually. No abnormality was observed in the mandibular anterior teeth and all teeth were vital (Figure 1). Anterior mandibular occlusal radiograph showed a roughly cone shaped radiolucency extending from lower left lateral incisor to the first premolar. Radiolucency was not associated with the roots of the teeth and was closer to the lower border of the mandible (Figure 2). The true occlusal radiograph showed a buccally located lesion with an intact buccal cortex and no expansion. There was no thinning of the lower border of the mandible (Figure 3). Panoramic radiography showed a well defined radiolucency measuring about 2 x1cms in size with regular, non corticated borders(Figure 4). Surgical exploration of the area showed an empty bone cavity(Figure 5). The cavity was curetted and tissue obtained submitted for histopathological examination. Sections showed collagenous fibrous tissue with some areas showing bony tissues and extravasated RBCs. There was no evidence of a cystic lining (Figure 6). Based on these features, a diagnosis of solitary bone cyst was made.

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Figure 1: Clinical intraoral photograph showing normal mucosa without cortical expansion.

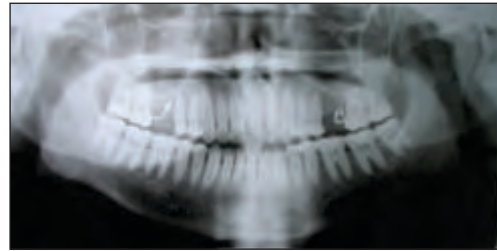


Figure 4: Panoramic radiograph showing cone shaped radiolucency with well defined, non corticated border in left mandibular anterior region.

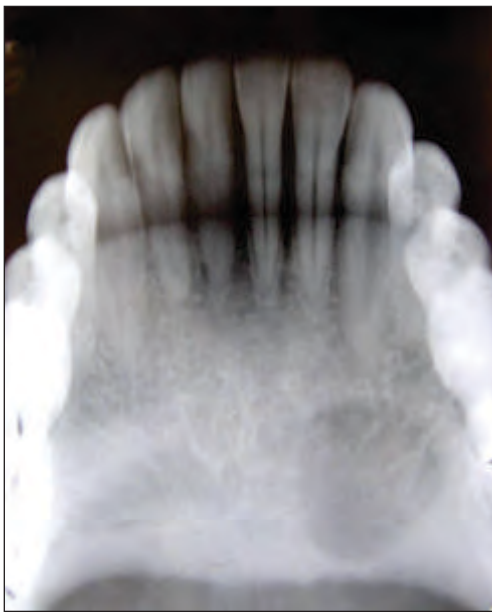


Figure 2: Anterior occlusal radiograph showing cone shaped radiolucency not associated with the roots of the teeth.



Figure 5: Surgical photograph showing empty cavity in mandibular left anterior region.

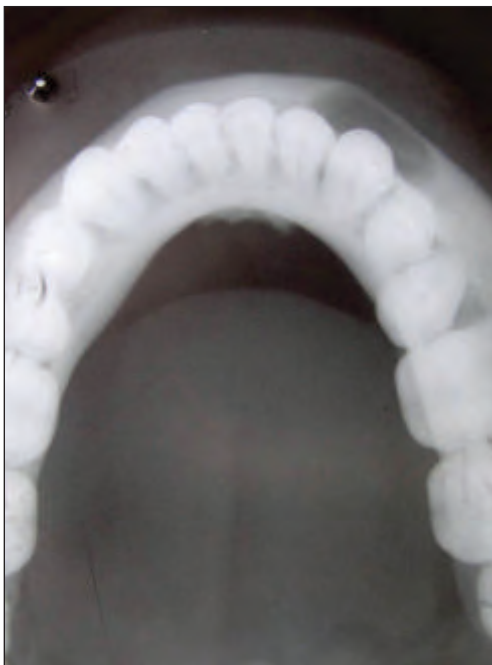


Figure 3: True occlusal radiograph showing radiolucency on the buccal aspect with no buccal or lingual cortical expansion.

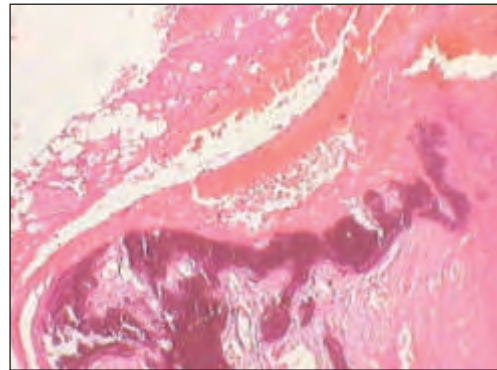


Figure 6: Photomicrograph (H & E, 10 X) showing collagenous fibrous tissue with no evidence of cystic lining.

Discussion :

The solitary bone cyst was first described by Lucas in 1929.[1] It is classified as an intraosseous pseudocyst due to the lack of an epithelial lining.[3,5]

The etiopathogenesis of solitary bone cyst is unclear. The various theories proposed include trauma, local alteration of bone metabolism, low grade infection, intraosseous vascular abnormalities and degeneration of bone tumours.[1,6,7] The age of occurrence is usually the second and third decade of life with slight male preponderance or no gender predilection.[7] The present case is of a 32 years

old male.

Over 90% of solitary bone cysts are discovered in long bones, notably the proximal humerus and femur.[8] In the gnathic bones, three fourth cases occur in the mandible than the maxilla with the premolar- molar region being a favoured site.[8] We observed the cyst in the mandibular anterior region.

Although usually asymptomatic, one study reported symptoms in 30% cases.[9] The commonest symptom was pain; other symptoms were swelling, tooth sensitivity, tenderness, hypoesthesia and pathological fracture.[2,4,10] Our case reported tenderness on palpation of the area.

On imaging, SBCs usually appear radiolucent. Radiopaque foci and cloudiness can be observed in few cases.[7,10] The borders may be irregular, well defined, with or without cortication.[7,10] Other features include scalloping or interdigitation between the roots, loss of lamina dura,

teeth displacement, and root resorption.[10] In the present case, the radiolucency was away from the tooth roots. One study categorised the radiographic morphology of SBC into 4 categories i.e. cone (64%); oval (16%); irregular (16%); round (4%).[11] We observed a cone shaped radiolucency in the mandibular anterior region. Histopathological examination reveals a thin band of vascular fibrous connective tissue without epithelial lining.[2] Treatment consists of surgical exploration and curettage of the bone wall.[10] We followed similar treatment protocol. According to few authors radiographic features such as absence of lamina dura, scalloped margins, nodular bone expansion, internal radioopaque masses and/or multiple cavities were suggestive of increased likelihood of recurrence following treatment.[7] However, none of these features were observed in our case. This report highlights a symptomatic presentation of solitary bone cyst in anterior mandibular region and also describes the clinical and radiographic features.

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