

Rare presentation of mandibular intraosseous cell Lipoma

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ARTICLE INFO

Keywords:

Lipoma
Adipose tissue
Mass
Mandible

ABSTRACT

Lipomas may be located in all parts of the body and may be confused clinically with other soft tissue masses. They infrequently occur in the head and neck. Surgical excision of a lipoma is often used as the definitive treatment modality, and alternative treatments described for lipomas range from liposuction to steroid injections. In the present study, a 38-year-old woman who was initially referred by her dentist due to a myofascial pain is described. An incidental finding (8*5mm mass) was successfully removed and diagnosed as intraosseous cell lipoma. The surgery produced excellent painless results and no functional or neural impairment. Clinically and radiographically, the tumor demonstrated inferior alveolar canal involvement. Such unique tumor characteristics never been previously reported, invalidating prior theories suggested for the etiological factors of this rare tumor. The current case report suggests a clear etiology for this tumor as a true primary benign neoplasm.

1. Introduction

Intraosseous lipoma was first described in 1880 [1] and is often considered to be one of the rarest primary bone tumors. It is composed of mature fat cells with variable small quantities of fibrous and vascular tissue [2–8]. Lipomas may undergo varying degrees of involution, with areas of fat necrosis, cyst formation and dystrophic calcification [5]. Thus, lipoma may resemble a bone infarct at surgical resection and on histological examination. Careful radiological-pathological correlation is required to avoid misinterpretation [5,9]. Intraosseous lipogenic neoplasms are extremely uncommon and are considered among the rarest benign primary tumors of bone [10,11]. Radiologically, intraosseous lipomas of the long bone appear as discrete osteolytic lesions, usually with a bordering sclerotic zone. Intraosseous mandibular lipomas mainly arise in the posterior region of the mandible [12–14]. The symptoms of intraosseous lipoma of the jaw depend on the location and size of the tumor. In the reported cases of intraosseous mandibular lipoma, swelling, pain and paresthesia were common complaints, but the lesion may remain asymptomatic for many years. Asymptomatic lesions have also been reported [2,3,6].

2. Case report

A female, 38-years-old was referred to the department of oral and maxillofacial surgery by her dentist with a diagnosis of myofascial

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pain.

Radiographic evaluation demonstrated a random radiolucent finding located adjacent to the apices of the left mandibular posterior teeth (Fig. 1). The patient's general health was good and her medical history was unremarkable. Extra oral examination did not reveal any abnormal findings, except for slight cortical expansion that could be palpated lingually to the 2nd and 3rd molars above the mylohyoid line. The intraoral examination showed no signs of inflammation. Cold pulp testing revealed that all left mandibular molars were vital. No paresthesia of the lip could be noticed. The lesion was asymptomatic and there was no history of trauma related to the posterior part of the mandible.

A panoramic radiograph showed a unilocular radiolucency involving the inferior alveolar canal with sclerotic margins, including few radio opacities in its lower margins, located between the mandibular molars and under-between the apices of those teeth. There was no external root resorption but a slight PDL loss could be observed at the 3rd molar.

Based on the radiological examination, clinical history and the location of the lesion, odontogenic keratocyst, odontogenic myxoma, early benign cemento-osseous lesion and central giant cell granuloma were considered as differential diagnoses before surgical enucleation of the lesion. The recommended treatment is simple-conservative excision as there have been no reported cases of recurrence or malignant change. Similarly, in long bones, curettage with or without bone grafting is the treatment of choice.

Under local anesthesia, a lingual mucoperiosteal flap was raised and the cortical bone was exposed. Surprisingly, at the moment of the flap reflection, a small part of the lesion could be noticed attached to it suggesting a cortical perforation of the tumor. After removing the cortical plate, the rest of soft and yellowish lobulated lesion was faced and curetted. Involvement of the inferior alveolar nerve could be noticed as predicted by a prior CT scan (Fig. 2). The tumor wasn't excised as one intact piece and the remaining bone was drilled with a large diamond bur.

After primary closure of the surgical site, a portion of the soft tissue was removed and submitted for histological examination. The postoperative course was uneventful. At the 6-month follow-up, there was no recurrence.

Histopathological examination revealed that the lesion was composed of mature adipose tissue with few capillaries, compatible with lipoma (Fig. 3). The definitive diagnosis reported by the pathology department was intraosseous lipoma. Histologically, the lesion consisted of well-delineated lobules of mature fat separated by anastomosing septa composed of loose fibrous connective tissue. Interspersed throughout these lobules of fat were few endothelium-lined spaces of varying sizes. These endothelium-lined spaces were congested with erythrocytes, and thrombus formation was evident at their periphery. There was an absence of inflammatory cells in the lesion. There was no evidence of a hematopoietic marrow component and few calcifying foci could be found.

Histologically, oral lipomas can be classified as simple lipomas or fibrolipomas, spindle cell lipomas, intramuscular or infiltrating lipomas, angiolipomas, salivary gland lipomas, pleomorphic lipomas, myxoid lipomas and atypical lipomas [15].

3. Discussion

The present classification of intraosseous lipomas has 3 stages according to their radiological and histological features [5]. The present case shows similarities with a stage 2 lesion in terms of its radiological features, but when the lack of the absence of reactive bone formation and extensive fatty necrosis is considered it may be classified as a stage 1 lesion. The lesions of intraosseous mandibular lipoma are commonly consistent with stage 1 lesions. To the authors' knowledge, this is one of the first cases of a stage 1 lesion in the

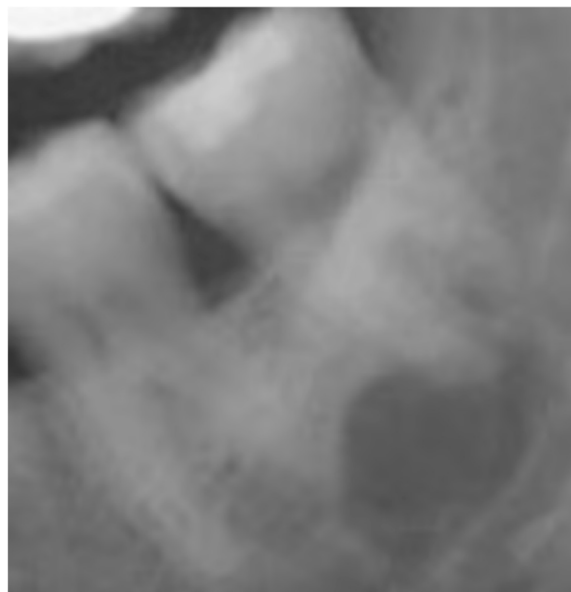


Fig. 1. Periapical film showing a circumscribed radiolucency extending to the inferior alveolar nerve canal and involving the apical quarter of the mandibular left first and second molars, including the apices.

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