

## CASE REPORT

**Oral osteolipoma: a case report**

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**Abstract**

We present the case of a 58-year-old female with an oral osteolipoma. Radiographic and histological features are discussed, along with a differential diagnosis and review of the literature.

**Introduction**

Lipoma is a benign mesenchymal neoplasm of adipose tissue that can be found anywhere in the human body. It is common in the upper limb and trunk. Osteolipoma is a distinct histological variant and a very rare oral lesion. Only a few cases have been reported worldwide arising in this location, and none have been reported in the British population.

**Case report**

A 58-year-old Caucasian female was referred by her general dental practitioner to the oral and maxillofacial surgery department with a bony hard swelling on the right hand side of her chin which was first noticed by her approximately a year ago. Slow increase in size but no pain or discomfort was reported. There was no history of discharge or bleeding from the lump. Medical history included osteoarthritis requiring the use of occasional non-steroidal anti-inflammatory drugs. The patient was a non-smoker and occasionally consumed alcohol.

Clinically, a 2 cm × 2 cm lump was noticed over the right side of the chin, causing obvious facial asymmetry. This was palpable intraorally in the labial sulcus apical to the lower premolars, hard and non-tender.

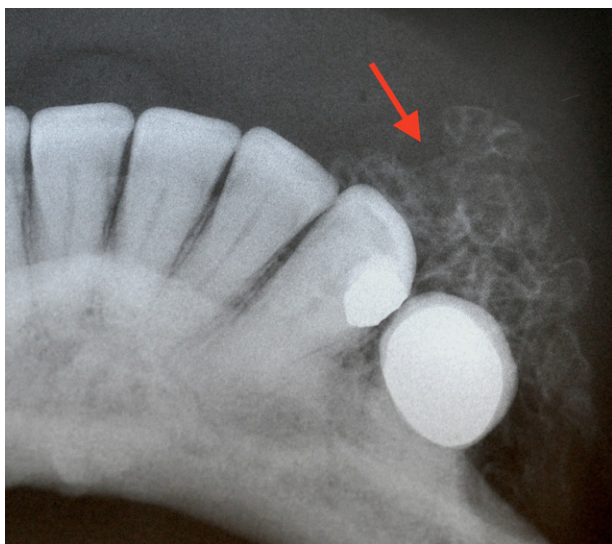
The overlying mucosa was intact, and there were no sensory disturbances associated with the trigeminal nerve. The premolar teeth were vital and non-tender to percussion.

Orthopantomogram showed features of an incomplete and heavily restored permanent dentition but no other significant abnormalities. A lower anterior occlusal view (Fig. 1) revealed a diffuse area in the right buccal sulcus adjacent to 43/44, with flecks of calcification within. There appeared to be no direct involvement with the adjacent bone, which would imply this to be a soft tissue lesion. A differential diagnosis would include a calcifying fibro-epithelial polyp or a calcifying (ossifying) lipoma. There was nothing to suggest that this lesion represents any form of malignancy.

An exploratory procedure was arranged under local anaesthetic with a vestibular incision. The lump was carefully removed (Fig. 2) using blunt dissection within clearly marked anatomical planes. Mental nerve was identified and protected throughout the procedure.

Histological sections (Fig. 3) showed adipose tissue containing thin-walled vessels with intersecting trabecular type bone with surrounding fibrous tissue, which extends into the adipose tissue. Appearance was in keeping with a benign osteolipoma.

On review 5 weeks post-surgery, the patient had some paraesthesia, affecting the distribution of the



**Figure 1** Lower anterior occlusal radiograph showing area of calcification (red arrow).

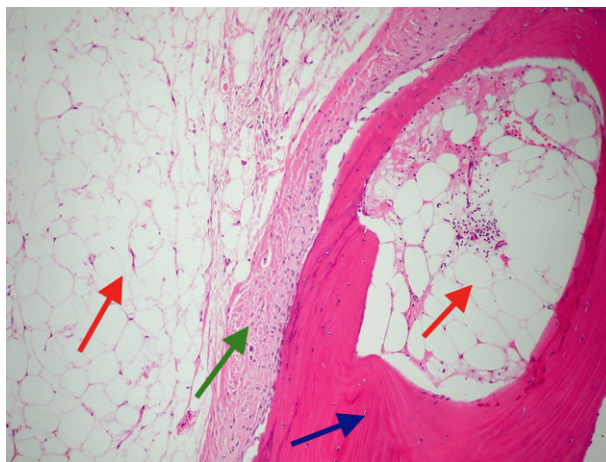


**Figure 2** Excised lump.

right mental nerve. This has since resolved and the patient has had a complete recovery with no evidence of recurrence.

## Discussion

Lipomas are benign mesenchymal neoplasms formed by mature adipose cells. Approximately 13–20% lesions affect the head and neck region, with 1–4% occurring in the oral cavity<sup>1,2</sup>. Several histological vari-



**Figure 3** Histological section (haematoxylin and eosin, magnification objective x20) showing lipocytes (red arrow), lamellar bone (blue arrow), mesenchymal cells (green arrow).

ants have been described, subtyping dependent upon inclusion of a second mesenchymal tissue.

Mesenchymoma was the term originally used to describe tumours containing at least two mesenchymal tissues not originally found together<sup>3</sup>. These tumours can be benign or malignant. The most commonly identified mesenchymal tissues are adipose tissue, blood vessels and smooth muscle in examples occurring in various anatomical locations<sup>4,5</sup>, although cartilage and bone have been occasionally identified in the head and neck region<sup>3,5</sup>. More recently, the term mesenchymoma has been used strictly to describe an un-encapsulated neoplasm composed of two or more mature mesenchymal tissues in the absence of predominance of one mesenchymal tissue at the expense of other tissues<sup>4</sup>. Conversely, if a soft tissue neoplasm is well demarcated or encapsulated and composed of a predominant mesenchymal element along with one or more secondary elements, the diagnosis should reflect the predominant mesenchymal tissue present<sup>4</sup>.

Of the subtypes, the most common is fibrolipoma<sup>6</sup>. Other variants include angiolipoma, myxolipoma, myolipoma, spindle-cell lipoma and pleomorphic lipoma<sup>7–9</sup>. Two distinct subtypes are osteolipoma and chondrolipoma, which contain osteoid and chondroid matrix, respectively, along with adipocytes<sup>10,11</sup>.

The pathogenesis of the osteolipomas remains uncertain, and some authors have suggested that many multipotent cells, or cells from different lineage differentiate into osteoblasts. Another theory proposes that only adipocytes transform into neoplastic tissue, and inclusion of osteoid represents osseous metaplasia of fibroblasts<sup>12–14</sup>.

**Table 1** Differential diagnosis of lump in buccal/labial mucosa

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Traumatic
• Mucocoele
• Fibroepithelial polyp
• Pyogenic granuloma
• Traumatic eosinophilic granuloma
Reactive
• Epulis
• Peripheral ossifying fibroma
• Peripheral giant cell granuloma
Infectious
• Sinus associated with odontogenic infection
• Infected ulcer
• Squamous papilloma
Neoplastic
• Benign
○ Osteoma
○ Lipoma
○ Neuroma
○ Neurofibroma
○ Salivary gland neoplasm
○ Other mesenchymal tumours
• Malignant
○ Squamous cell carcinoma
○ Sarcoma
○ Metastatic disease
Developmental
• Cysts
• Vascular malformations
• Fibro-osseous lesions

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In this case, histological sections showing the presence of intersecting trabecular bone with surrounding fibrous tissue, extending into the adipose tissue, support the later theory.

Treatment of choice of osteolipomas is surgical excision, and the prognosis is favourable. No recurrence has been reported<sup>12,15-17</sup>.

Differential diagnosis of buccal lumps is presented in Table 1.

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