

原文題目(出處)：	Osteolipoma: a rare tumor in the oral cavity
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【前言】

Lipoma:

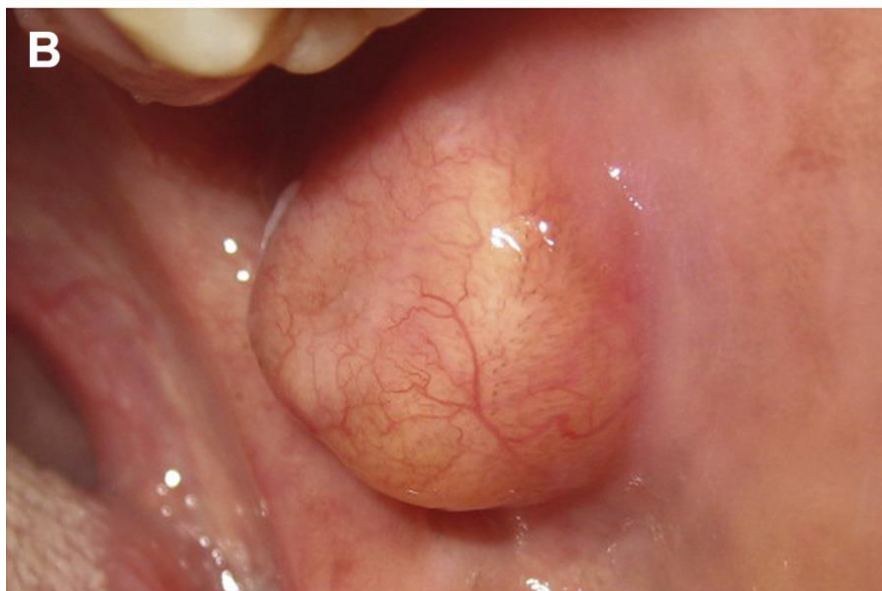
1. **benign** mesenchymal neoplasms of soft tissue
2. **20% of cases occur in the head and neck region**, with only 1% to 4% occurring in the oral cavity: buccal mucosa, floor of the mouth, and lips
3. Histologic variants: fibrolipoma, angioliipoma(血管), myoliipoma(肌細胞), leiomyoliipoma(平滑肌), myxoliipoma(黏液), spindle cell lipoma, **osteoliipoma**, chondrolipoma(軟骨), and sialoliipoma(唾液腺).

Osteoliipoma:

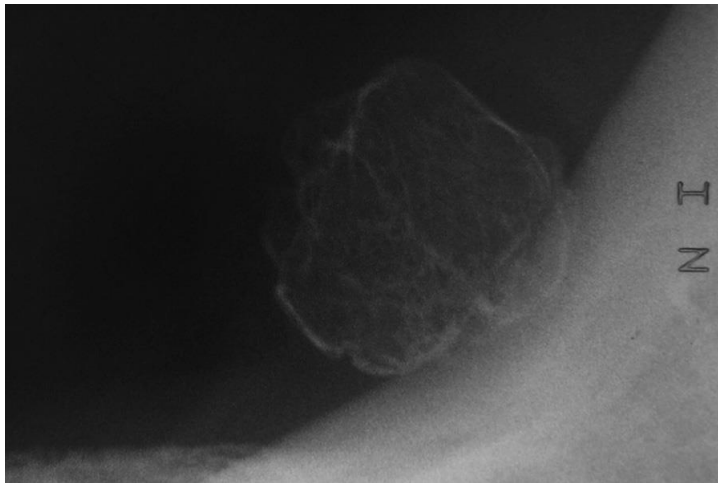
1. **less than 1%**, only 13 cases was presented
2. classified as intraosseous when located in bone and as parosteal or periosteal when located adjacent to bone

【Case report】

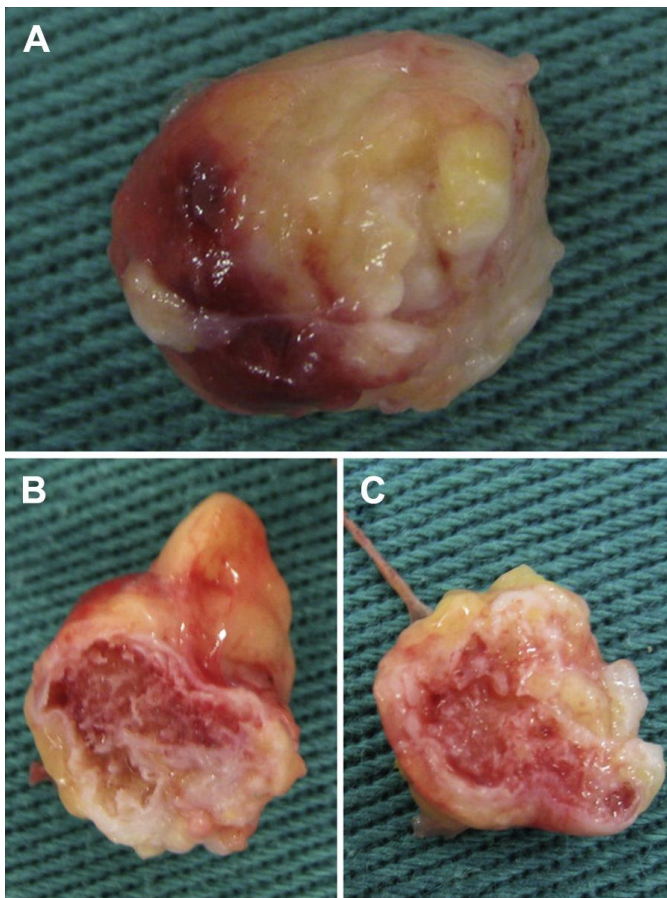
1. 29-year-old female with a **painless** mass in the left buccal mucosa with an 8-month evolution. The patient had no history of trauma in that region.
2. Physical intraoral examination showed a 1.5 x 1.5 cm, **well-defined, movable** submucosal mass in the left posterior buccal mucosa, near the retromolar triangle. The lesion had a **yellowish** appearance and **hard consistency**. The overlying mucosa showed telangiectasia but no ulceration or erythema.



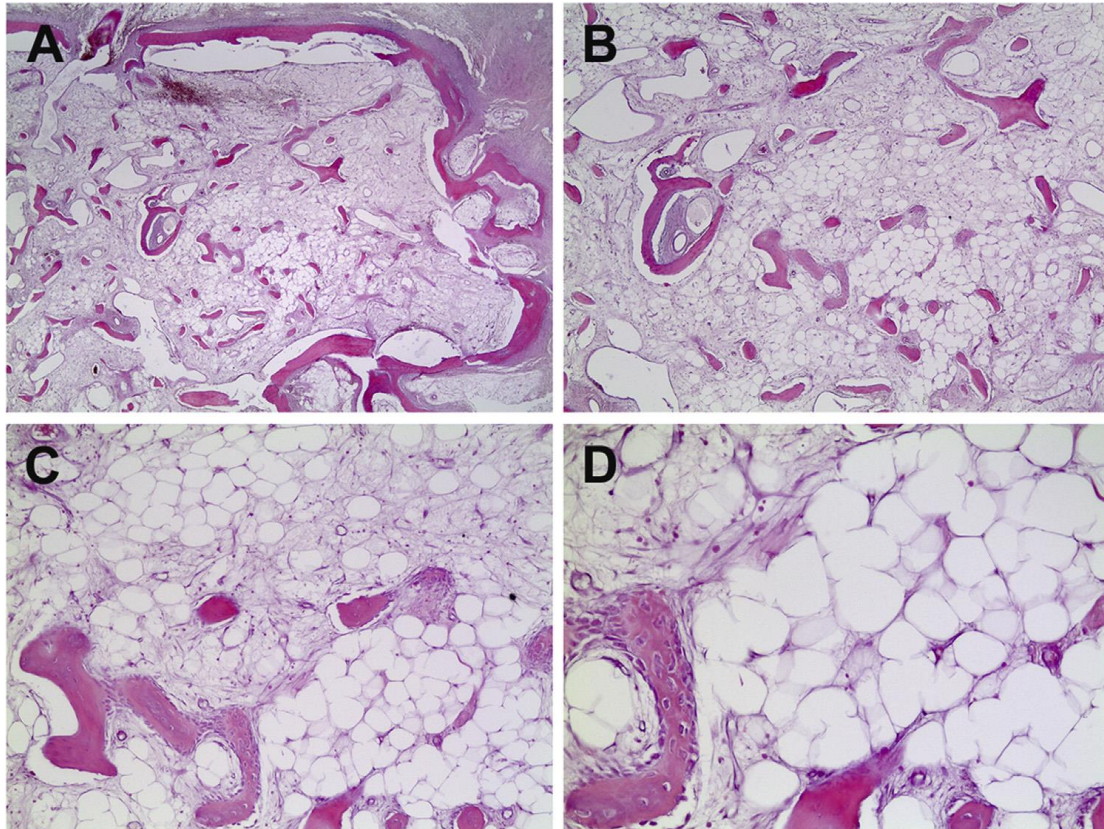
3. Imaging findings revealed a **round** area of **radiopacity**, with an **irregular pattern of trabeculae**, and no evidence of influence on the surrounding structures was found.



4. With the patient under local anesthesia, the lesion was completely excised, and it was **not attached to any adjacent structures**, such as the mandibular bone.
5. Specimen :
- (1) consisted of a mass measuring 1.8 x 1.5 x 1.2 cm
 - (2) **Yellowish** with various intermixed thin lamellar **bony structures** and a **fibrous capsule**.



6. Microscopically:
- (1) **Abundant mature adipose tissue**, with no atypia, and was separated by thin **fibrous connective tissue septa**.
 - (2) Randomly distributed **irregular trabeculae of immature bone**, with osteoblastic activity, were found throughout the tumor.
 - (3) **No foci of hematopoietic cells were observed**
 - (4) **Surrounded by a thin osseous layer and a fibrous capsule**.



7. A final diagnosis of osteolipoma was established. The recovery course was uneventful, and **no recurrence was detected after a 5-year long follow-up**.

【Clinical differential diagnosis】

Oral osseous choristoma (soft tissue osteoma), cartilaginous choristoma, osteolipoma, chondrolipoma, pleomorphic adenoma with ossification, and other salivary gland or connective tissue tumors with dystrophic calcification.

Table I. Osteolipomas of the oral cavity previously reported in the English language literature (current case included)

Author	Age (Years)	Gender	Site	Clinical presentation	Imaging findings	Duration	Histopathology
Godby et al. ¹¹	54	Male	Floor of the mouth	Painless and soft mass. Size: 7.0 × 6.0 × 3.0 cm (gross examination)	Radiopaque mass (occlusal radiography)	1 year	Mature adipose tissue, well-formed cancellous bone, fibrous connective tissue and striated muscle
Hughes CL ¹²	69	Male	Mandibular buccal vestibule	Painless and soft yellowish "walnut-size" mass Slight facial asymmetry	No evidence of alterations (radiography)	NA	Fat cells with foci of ossification surrounded by fibrous connective tissue
Allard et al. ¹³	81	Female	Mandibular buccal vestibule	Facial asymmetry Painless and hard "walnut-size" mass	Well defined radiopaque mass with a pattern of irregular trabeculae (occlusal radiography)	30-40 years	Homogeneous adipose tissue containing fibrous septa and irregular trabeculae of lamellar bone without hematopoietic tissue
Piattelli et al. ⁹	49	Female	Lateral margin of the tongue	Painless and hard mass Size: 0.8 cm in diameter	NA	8 years	Mature adipose tissue containing lamellar bone surrounded by a fibrous pseudocapsule
Castilho et al. ⁸	65	Female	Buccal mucosa	Painless and soft yellowish mass Size: 1.0 × 1.0 × 0.8 cm (gross examination)	NA	NA	Mature fat cells supported by fibrous septa. Focal areas of woven bone surrounded by fusiform-shaped mesenchymal cells
Saghafi et al. ⁵	68	Male	Mandibular buccal alveolar mucosa	Painless and hard mass. Size: 1.5 × 1.0 cm	No evidence of cortical abnormality or influence on the surrounding structures (radiography)	4 years	Adipose tissue with foci of lamellar bone surrounded by mesenchymal cells
Gokul et al. ¹⁴	6	Male	Hard palate (associated with cleft of hard and soft palate)	Painless and soft mass. Size: 3.0 × 2.0 cm	Well-defined hypodense lesion arising with mixed density, showing a well-defined radiodense body (computed tomography)	Congenital	Lobules of adipose tissue separated by fibrovascular connective tissue septa and showing the presence of mature bone
de Castro et al. ¹	47	Female	Buccal mucosa	Facial asymmetry Painless nodule. Size: 1.5 cm in diameter	An irregular and radiopaque structure (radiography of the surgical specimen)	1 year	Trabeculae of lamellar bone inside a mature adipose tissue surrounded by thin septa of conjunctive tissue
Adebiji et al. ⁶	37	Female	Hard palate	Painless and hard mass. Size: 3.0 × 4.0 cm	Patchy areas of radiopacity (occlusal radiography)	10 years	Mature adipose tissue with scattered trabeculae of lamellar bone
Hsu et al. ¹⁵	71	Male	Buccal mucosa	Painless and hard mass. Size: 4.0 × 2.5 cm	NA	4 years	Lobules of mature adipose tissue separated by fibrous septa Randomly distributed trabeculae of mature lamellar bone and foci of woven bone
Bajpai et al. ¹⁶	55	Male	Hard palate	Painless and hard yellowish mass Size: 1.5 × 1.4 cm	Patchy area of radiopacity (occlusal radiography)	4 years	Bone trabeculae surrounded by lobules of mature adipocytes separated by fibrous septa
Amaral et al. ¹⁰	51	Male	Mandibular buccal mucosa	Slight facial asymmetry. Painless and hard mass. Size: 2.0 × 1.5 cm	Well-defined hyperechogenic mass with areas of calcification (ultrasonography)	3 years	Proliferation of mature fat cells with central areas of lamellar bone trabeculae and fibrous septa
Raghunath and Manjunatha ¹⁷	20	Female	Floor of the mouth	Painless and hard yellowish mass Size: 6.0 × 6.0 cm	Well-defined, hypodense lesion with irregular hyperdense areas (computed tomography)	3 years	Central areas of osseous trabeculae and lobules of matured adipose tissue
Omote et al. (current case)	29	Female	Buccal mucosa	Painless and hard mass. Size: 1.5 × 1.5 cm	Spherical radiopacity with an irregular trabecular pattern (radiography)	8 months	Mature adipose tissue with fibrous septa and irregular trabeculae of immature bone Tumor surrounded by a thin osseous layer and a fibrous capsule

【Discussion】

1. Above table

- (1) **no clear gender preponderance**
- (2) **except for one case of a young boy, most patients were adults**
- (3) **slow progression**
- (4) **occur in various anatomic sites: buccal mucosa(4), buccal vestibule(4), hard palate(3), mouth floor(2), lateral tongue(1)**
- (5) **clinical and radiographic features (hard or soft peripheral mass generally associated with a radiopaque area), as well as the histopathologic appearance of mature fatty tissue with diffuse bone trabeculae, usually confirm the diagnosis of osteolipoma**

2. However, these features are also found in oral **osseous choristoma**:
 - (1) Krolls et al. in 1971 to describe **benign bone formations in oral soft tissue**, previously referred to as soft tissue osteomas.
 - (2) A mass of **dense lamellar bone**, which is easily differentiated from an osteolipoma
 - (3) Some of these lesions can display a cancellous pattern: Hodder and MacDonald in 1988, display spongy bone trabeculae containing abundant bone marrow spaces filled with fatty tissue
 - (4) **Foci of hemopoietic marrow are encountered in osseous choristomas** but not in osteolipomas
 - (5) Treated by conservative surgical excision and exhibit similar prognoses
3. Pathogenesis of osteolipomas:
 - (1) Has not yet been clarified
 - (2) May originate from **two types of undifferentiated mesenchymal cells** that separately form adipose and bone cells
 - (3) Multipotent **adipose-derived stem cells** within adipose tissue may be involved in osteolipoma development
 - (4) Repetitive trauma, metabolic changes, or ischemia may lead to metaplasia of **pre-existing fibrous** elements within lipomas, which then **develop into osteoblasts**

【Conclusion】

Osteolipomas:

1. Very rare
2. Clinical: hard consistency on palpation
3. Image examinations: radiopacity
4. Histopathological: mature adipose tissue associated with bone trabeculae
5. Same prognosis as a simple lipoma:
 - (1) Surgical excision
 - (2) Recurrences have not been reported

題號	題目
1	<p>下列關於 lipoma 之敘述何者有誤?</p> <p>(A) may occur after local trauma</p> <p>(B) most common intraoral sites : buccal mucosa and buccal vestibule(about 50%)</p> <p>(C) treated by conservative local excision</p> <p>(D) recurrence is common</p>
<p>答案</p> <p>(D)</p>	<p>出處：Oral and Maxillofacial Pathology , 4th edition, Ch.12</p> <p>說明：Lipoma 本身以及各種變異中，只有 Intramuscular lipomas 有較高的復發率</p>
題號	題目
2	<p>下列 lipoma 的變異中何者最常見?</p> <p>(A) fibrolipoma</p> <p>(B) angiolipoma</p> <p>(C) sialolipoma</p> <p>(D) intramuscular (infiltrating) lipomas</p>
<p>答案</p> <p>(A)</p>	<p>出處：Oral and Maxillofacial Pathology , 4th edition, Ch.12</p>