原文題目(出處)：	Multiple myeloma with primary manifestation in mandibular area. Oral Surg 2012;5:26-9
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內文：

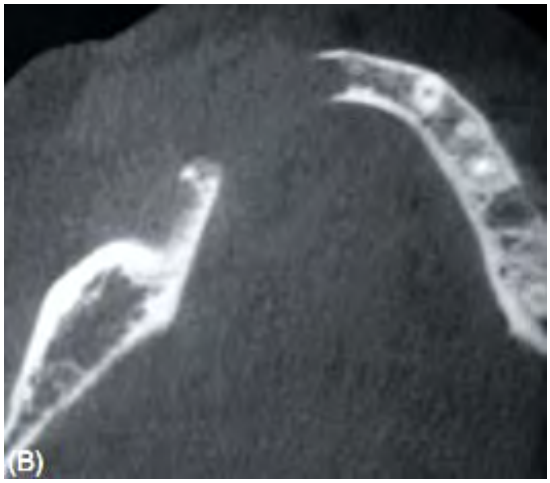
Introduction

- Multiple myeloma (MM) is a relatively rare, malignant haematological disease characterised by the multicentric proliferation of plasma cells in the bone marrow.
  - mainly in men , aged 50~80 y/o (mean of 60 y/o).
  - The more common clinical manifestations are persistent pain in the bone.
  - More than 30% develop osteolytic lesions in the jaw.
  - Jaws lesions are usually more frequent in the posterior region of the mandible (molars and premolars), and pain may be the initial symptom of the disease.
  - Manifestations such as gingival haemorrhage, odontalgia, paraesthesias, dental mobility, ulcerations and increased volume may also be present.
- In 1992, Scutellari and Orzincolo reviewed 237 cases of MM, and diagnosis was based on the following criteria:
  - an increased number of abnormal, atypical or immature plasma cells in the bone marrow.
  - the presence of a monoclonal protein in the serum or urine.
  - bone lesions consistent with those of myeloma.
- Symptoms include pain and swelling of the oral cavity, tooth mobility and loss, numbness along the inferior dental nerve and paraesthesia of the lower lip.
- Radiographic appearance: well-defined ‘punched-out’ lytic defect, which may be solitary or multip

Author	Number of cases with oral primary manifestation of multiple myeloma	Clinical and radiographic characteristics
Baykul *et al.* (2004)[7]	01	Mandible: numbness and osteolytic manifestations
Ho *et al.* (1999)[8]	01	Mandible: swelling of masticatory muscles, osteolytic lesions
Pisano *et al.* (1997)[1]	06	01 Maxilla: gingival lesion 05 Mandible: soft tissue and osteolytic lesions
Huang *et al.* (1997)[9]	01	Mandible: gingival swelling
Witt *et al.* (1997)[10]	10	Mandible: osteolytic lesions
Lee *et al.* (1996)[11]	02	Mandible: gingival/alveolar mass with hypermobility of the teeth, osteolytic lesions
Scutellari and Orzincolo (1992)[5]	03	Mandible: osteolytic lesions
Monje *et al.* (1989)[12]	01	Mandible: osteolytic lesion
Yoshimura *et al.* (1976)[13]	01	Mandible: swelling and osteolytic lesion

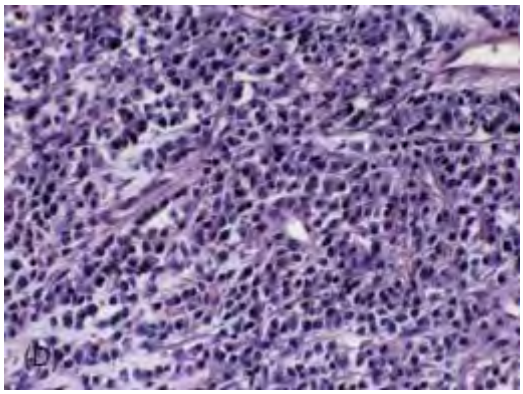
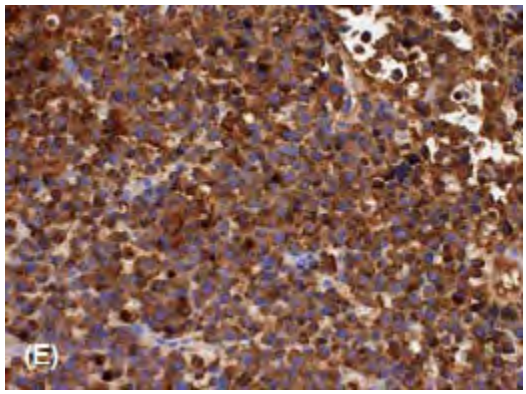
Case report

- Age: 73-year-old man
- Chief complaint : a painful mandibular enlargement persisting for 1 month with an increase in the volume of the gingiva, which bled during oral hygiene.
- Intraoral examination: a purple mass in the mandibular alveolar ridge measuring 1.5 cm in length.



- Radiographic examination : a characteristic rounded, ‘punched-out’ lesion and a well-defined radiolucent image extending into the mandibular ramus and body.
- A CT scan showed a mandibular osteolytic lesion extending into the surrounding soft tissue.

- Skeleton radiography (Xray) showed no other bone lesions besides the jaws.
- Incisional biopsy was performed, and a histopathological study revealed monotonous proliferation of plasmacytoid cells with round, eccentric nuclei with fine granular chromatin and evident nucleoli.
- The cells were strongly immunore-active to Kappa IgG and were not positive to a Lambda light chain.

- At the time of diagnosis, the patient suffered from pathological bone fractures in his ribs, and a urine test was positive for Bence Jones protein.
- The CRAB criteria (calcium, renal, anaemia and bone lesions) : only anaemia was observed.
- Laboratory routine test : showed moderate pancytopenia, and electrophoresis confirmed IgG-positive monoclonal gammopathy. (單株抗體球蛋白症-final diagnosis of MM.)
- The patient was submitted to conformal radiotherapy (3600 cGy), followed by bortezomib chemotherapy (1.3 mg/m^2) with melphalan (9 mg /m^2) and prednisone.
- After two cycles, the treatment was stopped because of intolerance, and maintenance therapy with dexamethasone was prescribed; however, progression to death inexorably followed after 6months.

Discussion

- MM may involve the jaws(10–30% of cases) , and mainly affects the mandibular molar region, ramus and angle of the mandible because these areas exhibit intense haematopoietic activity.
- The oral manifestations of MM, although rare, may present as a first sign of disease.
- Differential diagnosis for malignancy of plasma cells involving the jaws : solitary plasmacytoma of the bone, soft tissue solitary plasmacytoma and systemic MM.

Table 3 Plasma cell neoplasias – differential diagnosis

Characteristics and differential diagnosis
Systemic multiple myeloma
• Change of M protein in serum and/or urine
• Plasma cell infiltrates in bone marrow
• With systemic changes
Solitary plasmacytoma of the bone
• Single bone lesion
• Normal bone marrow
• Radiography of the skeleton is normal
• Without M protein
• Without systemic changes
Extramedullary plasmacytoma
• Extramedullary plasmacell tumour
• Normal bone marrow
• Radiography of the skeleton is normal
• Without M protein
• Without systemic changes

- In this case report, the patient had no other injuries besides the osteolytic lesion of the jaws and the rib fracture before the patient underwent intensive

chemotherapy.

- This clinical condition coupled with the absence of bone pain symptoms lead the medical team delay to begin bisphosphonates treatment.(to prevent bone loss and fractures.)
- The described condition suggests that routine tests (oral and X-ray) should be performed to diagnose MM. Male patients >55 years are more susceptible to the onset of this disease.
- This case report supports the data on the prevalence of MM in the jaws and illustrates the contribution that oral assessment can provide for the diagnosis of this disease.

題號	題目
1	下列何種血液性疾病較常發生在中老年男性? (A) Acute lymphocytic leukemia (B) Multiple myeloma (C) Burkitt's lymphoma (D) Langerhans cell histiocytosis
答案(B)	出處：oral & maxillofacial pathology ,2 edition
題號	題目
2	Which one is not the primary malignant tumor of the jawbones.? (A) Multiple myeloma (B) Chondrosarcoma (C) Simple bone cyst (D) Osteosarcoma
答案(C)	出處：Differential Diagnosis of Oral and Maxillofacial Lesions, 5th Edition, Multiple myeloma> Osteosarcoma > Chondrosarcoma