

## CASE REPORT

# Primary lesion of multiple myeloma presenting as gingival swelling

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**ABSTRACT**

It is rare that multiple myeloma (MM) occurs as a primary lesion in the jaws; we report such a case in an elderly patient involving the gingiva of the left posterior mandible. Multiple myeloma is a monoclonal malignant neoplasm of plasma cell origin which occurs in the bone marrow and may result in extensive destruction of skeletal structures. If the jaws are involved, it usually indicates an advanced stage of the disease. This makes our case very unique due to the fact no other osteolytic lesions were identified at the time of the diagnosis of multiple myeloma. We report a rare case of multiple myeloma which was diagnosed from an intraoral gingival lesion on the lower left mandible.

**Key words:** Malignant plasma cells, multiple myeloma, plasmacytoma

**INTRODUCTION**

Multiple myeloma is a monoclonal malignant neoplasm of plasma cell origin which occurs in the bone marrow and may result in extensive destruction of skeletal structures.<sup>[1]</sup> It most commonly affects the skull, vertebrae, and pelvis,<sup>[2]</sup> with pain, fatigue, swelling, and anemia being some of the most common clinical presentations.<sup>[1,3]</sup> It accounts for 10% of hematologic malignancies in Caucasians and 20% in African Americans.<sup>[3,4]</sup> Approximately 98% of cases occur in patients over the age of 40.<sup>[5]</sup> It is rare that multiple myeloma presents as a primary lesion in the jaws. We report a case of multiple myeloma diagnosed from an intraoral lesion.

**CASE REPORT**

An 83-year-old African American female presented to the emergency department with mild pain and swelling over the posterior left mandibular alveolar ridge [Figure 1]. The lesion was approximately 2 cm × 2 cm × 1.5 cm in the area of the missing first molar. On palpation, it was firm with no fluctuance. Radiographically, an ill-defined radiolucency of the alveolar bone was identified [Figure 2].

An incisional biopsy revealed a malignant neoplasm of hematopoietic origin with sheets of malignant plasma



**Figure 1:** Initial clinical presentation of the patient with gingival swelling between teeth 18 and 20

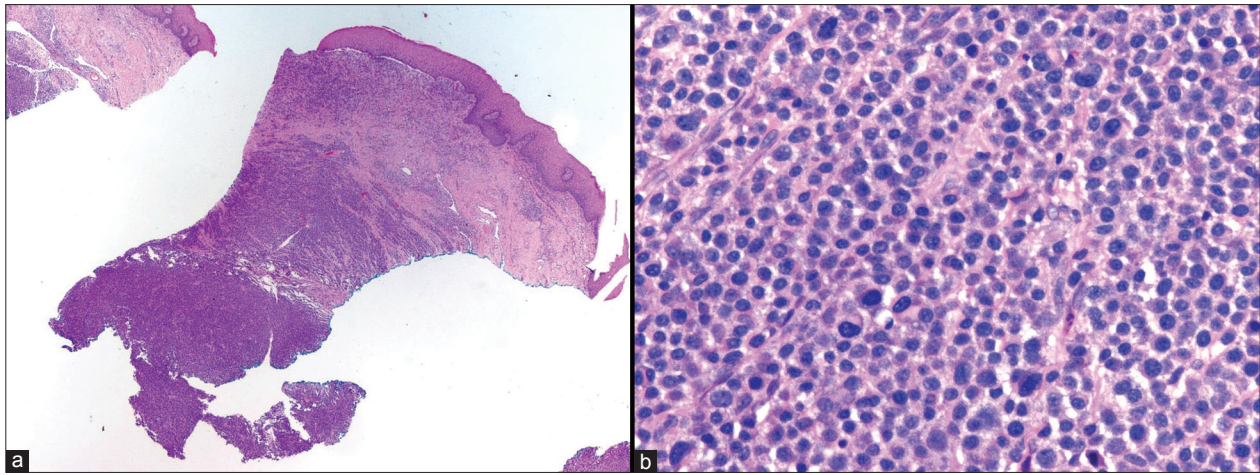


**Figure 2:** Radiograph showing an ill-defined radiolucent area in the bone between teeth 18 and 20

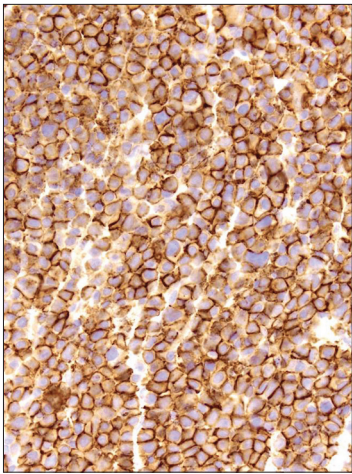
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10.4103/0973-029X.102508



**Figure 3:** (a) Low magnification shows stratified squamous mucosa on right upper end with cellular infiltrate in left lower portion of the image; (b) Magnification of H and E histology shows sheets of plasma cells, most are large and atypical with large nuclei and prominent nucleoli



**Figure 4:** Immunohistochemistry stain for CD138 antibody. Note uniform positive staining with CD138, a marker for plasma cells

cells ranging from mature to immature forms as well as pleomorphic cells and occasional binucleated cells [Figure 3]. The neoplastic plasma cells were strongly positive with kappa light chain antibody and with CD138 [Figure 4], both supporting the histological diagnosis of plasmacytoma.

A bone marrow aspirate biopsy was performed on the left posterior iliac crest where sheets of neoplastic plasma cells were identified. They were positive for CD 138 confirming the diagnosis of multiple myeloma. A random urine collection showed elevated Bence-Jones protein (0.09 g) and a subsequent 24 h urine collection demonstrated a level of 0.13 g (normal 0.050–0.080).

## DISCUSSION

Multiple myeloma is the most common malignant neoplasm of bone. The disease is usually found in the sixth and seventh decades of life with a median age of 62,<sup>[6]</sup> 66,<sup>[5]</sup> 71.<sup>[4]</sup> It is a multicentric and generalized bone marrow disease that affects

multiple bones and can include the jaws. In a review of 193 patients with diagnosed multiple myeloma, only 5.18% were found to have osteolytic lesions of the mandible.<sup>[7]</sup> Epstein *et al.* reported that out of 783 multiple myeloma patients, 14.1% had oral manifestations in the form of jaw pain, severe periodontitis, tooth mobility, bone destruction, pathologic fracture, paresthesia, and soft tissue swelling.<sup>[6]</sup> Usually, if the jaws are involved, it is an indication of an advanced stage of the disease.<sup>[1]</sup> In the case we report, no other lesions were identified on the osseous skeletal survey performed the same month as the biopsy. This patient had a systemic manifestation of multiple myeloma despite the jaw being the only bone affected; she had mild anemia, elevated serum calcium, and Bence-Jones protein in her urine. She also had sheets of neoplastic plasma cells in her bone marrow biopsy performed on the left posterior iliac crest. The neoplastic plasma cells were positive with CD138 antibody confirming the presence of the disease in an area away from the jaw.

We present a case of multiple myeloma first manifesting in the mouth as a mildly painful gingival swelling with underlying irregular bone destruction. We recommended that all patients receive a routine oral examination by their dentist and primary care physician to insure early recognition of malignant neoplasms of the mouth.

## ACKNOWLEDGEMENT

We would like to thank Dr. Heike Deubner for the images of the pathology slides.

## REFERENCES

1. Lee SH, Huang JJ, Pan WL, Chan CP. Gingival mass as the primary manifestation of multiple myeloma. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 1996;82:75-9.
2. Mozaffari E, Mupparapu M, Otis L. Undiagnosed multiple myeloma causing extensive dental bleeding: Report of a case and review. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod*

- 2002;94:448-53.
3. Katzel JA, Hari P, Vesole DH. Multiple myeloma: Charging toward a bright future. *CA Cancer J Clin* 2007;57:301-18.
  4. Zaidi AA, Vesole DH. Multiple myeloma: An old disease with new hope for the future. *CA Cancer J Clin* 2001;51:273-85.
  5. Kyle RA, Gertz MA, Witzig TE, Lust JA, Lacy MQ, Dispenzieri A, *et al.* Review of 1027 patients with newly diagnosed multiple myeloma. *Mayo Clin Proc* 2003;78:21-33.
  6. Epstein JB, Voss NJ, Stevenson-Moore P. Maxillofacial manifestations of multiple myeloma an unusual case and review of the literature. *Oral Surg Oral Med Oral Pathol* 1984;57:267-71.
  7. Lambertenghi-Deliliers G, Bruno E, Cortezzi A, Fumagalli L, Morosini A. Incidence of jaw lesions in 193 patients with multiple myeloma. *Oral Surg Oral Med Oral Pathol* 1988;65:533-7.

**How to cite this article:** DaBell M, Oda D, Thompson RE. Primary lesion of multiple myeloma presenting as gingival swelling. *J Oral Maxillofac Pathol* 2012;16:425-7.

**Source of Support:** Nil. **Conflict of Interest:** None declared.

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