An elderly man with a gingival mass that spontaneously regressed

Luis Miguel Gonzalez-Perez, MD, DDS, PhD,[a] and Juan Jose Borrero-Martin, MD, PhD[b]

(Oral Surg Oral Med Oral Pathol Oral Radiol 2016;121:348-352)

CLINICAL PRESENTATION

A 75-year-old man was referred to the Maxillofacial Surgery Clinic with a 2-month history of a painless lesion in the oral cavity, which had gradually grown in size and was interfering with his ability to speak and eat normally. The patient reported that the left mandibular second premolar tooth had been extracted 3 months earlier, but the area had been slow to heal. The patient's medical history included arterial hypertension, type 2 diabetes, grade III hydroureteronephrosis of the right kidney, and degenerative joint disease with severe back pain and limited movement of affected joints (shoulders and hips). He was an occasional tobacco smoker and a social drinker. Physical examination revealed a large, exophytic, 5 × 5 cm, lobulated mass in the left mandibular vestibular aspect, moderately tender to palpation, and extending from the first premolar area to the retromolar trigone and sublingual regions (Figure 1). There was no evidence of palpable cervical lymphadenopathy. Initial laboratory data showed the following: hemoglobin 14.2 g/dL; hematocrit 42.7%, with a mean corpuscular volume of 91.8 fL; white blood cell count 7240 cells/mL; platelet count 166,000/μL. Liver function tests revealed an albumin level of 4 g/dL; total protein 6.6 g/dL; total bilirubin 0.3 mg/dL; alkaline phosphatase 75 IU/L; alanine transaminase 12 IU/L; aspartate transaminase 16 IU/L; and a normal serum lactate dehydrogenase of 215 IU/L. Hepatitis A, B, and C serology were negative, and the human immunodeficiency virus screen was negative. A panoramic radiograph revealed a poorly defined radiopaque area underlying and posterior to the left edentulous area, with no mandibular erosion (Figure 2). Computed tomography of the head and neck revealed only an expansive lesion in the vestibular oral mucosa.

DIFFERENTIAL DIAGNOSIS

Patients with gingival enlargements are seen frequently, but the differentiation of reactive lesions from neoplastic lesions is essential. Initially, our patient's dental history was suggestive of an inflammatory process resulting from dental extraction. Pyogenic granuloma or peripheral giant cell granuloma are smooth or lobulated exophytic inflammatory hyperplastic tumors, which manifest in response to local irritation or traumatic injury; they are usually hemorrhagic and generally less than 2 cm in size. The pyogenic granuloma is a red- or pink-colored smooth-surfaced mass, which is characteristically ulcerated and grows from beneath the gingival margin and so displaces this apically. The peripheral giant cell granuloma, which typically occurs in younger patients, has a purplish-red, almost cyanotic, color and a propensity for hemorrhage, which attests to a highly vascular lesion. On the basis of clinical and imaging characteristics of the patient's lesion, this diagnosis can likely be excluded.[1]

At this time, differential diagnoses included myeloma, non-Hodgkin lymphoma, amelanotic melanoma, and metastatic carcinoma. Multiple myeloma is a progressive neoplastic proliferation of plasma cells, which causes displacement of normal cells in bone marrow and produces paraproteins in blood and urine. Skeletal pain, which was present in our patient, and anemia are the most common presenting symptoms; typical osteolytic lesions and oral manifestations may occur as a consequence of a local manifestation of plasma cell neoplasms but rarely occur as the first sign of the disease.[2] Plasmablastic lymphoma may be considered a rare variant of large B-cell lymphoma and usually develops in middle-aged adults. The lymphoma predominantly involves the gingival and palatal mucosa, causing thickening and ulceration, and has a tendency to infiltrate adjacent bone, but these features were not observed in our patient.[3,4] Oral amelanotic melanomas are also a diagnostic possibility, even though they are extremely rare lesions. They occur more commonly in the maxillary gingiva and less frequently in the mandibular gingiva.[5,6] Metastatic carcinoma was also possible; despite its rarity, bone metastasis is more common than oral mucosal metastatic lesions, and the most common locations are the molar and premolar regions of the mandible, as was the case in our patient. Less than 1% of all malignant tumors metastasize to the oral and maxillofacial area and mainly originate from the breast, lung, kidney, thyroid gland, intestine, prostate gland, stomach, testis, or bladder.[7] The majority of metastatic mandibular lesions

[a]Department of Oral and Maxillofacial Surgery, Virgen del Rocio University Hospital, Seville, Spain.
[b]Department of Pathology, Virgen del Rocio University Hospital, Seville, Spain.

Received for publication Jul 6, 2014; returned for revision Jun 12, 2015; accepted for publication Aug 20, 2015.

2212-4403/$ - see front matter
http://dx.doi.org/10.1016/j.oooo.2015.08.014

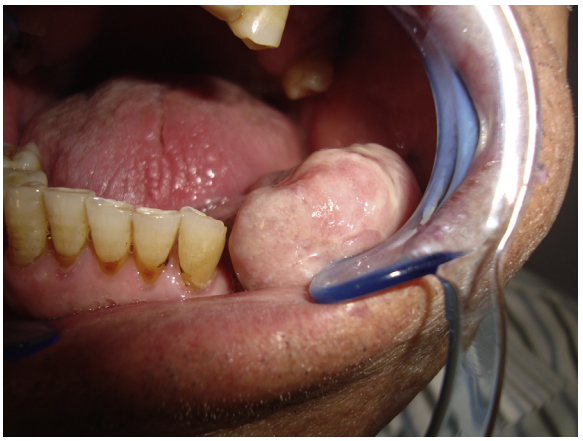

Fig. 1. Clinical appearance of the oral mucosa in the left molar and retromolar area, with a rapidly growing pedunculated swelling.

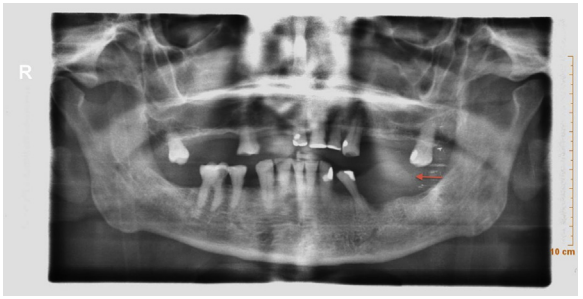

Fig. 2. Panoramic radiograph showing a soft tissue mass in superior to the edentulous left mandible, as well as a diffuse radiopaque area underlying and posterior to the mass, with no bone erosion (*see arrow*).

are poorly defined radiolucencies, with occasional mixed or radiopaque lesions, which were not observed in our case.

This case shows that clinical and radiologic examinations are essential in the evaluation of a gingival mass. If the clinical features are suspected, as in this patient, a histopathologic study is necessary for a correct diagnosis.

DIAGNOSIS

An incisional biopsy was performed, and histologic examination showed a submucosal mass under a focally ulcerated mucosa, with diffuse infiltration of neoplastic large plasmablastic cells (Figure 3). On the basis of findings from hematoxylin and eosin staining, plasmablastic lymphoma and plasmacytoma/myeloma were considered. Intense immunostaining for CD79a (Figure 4), CD138, and cytoplasmic restricted κ-light chains (Figure 5), as well as negativity for λ-light chains, CD45, CD20, and other nonlymphoid markers, was also seen. These findings strongly suggested that

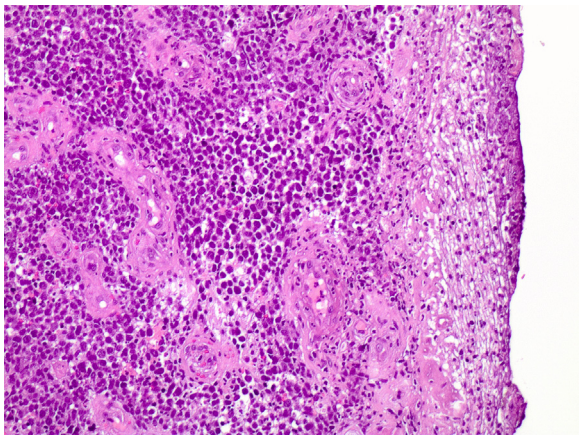

Fig. 3. Diffuse infiltration of neoplastic large plasmablastic cells with pleomorphism and nuclei with one or several nucleoli (hematoxylin and eosin, original magnification ×200). *A high-resolution version of this slide for use with the Virtual Microscope is available as an eSlide (VM00439).*

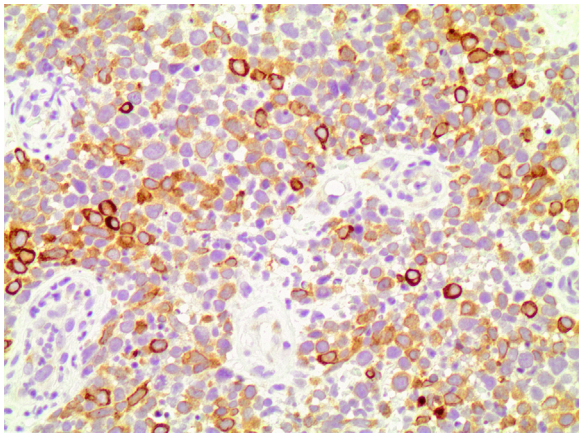

Fig. 4. Immunostaining for CD79 a (hematoxylin and eosin, original magnification ×400). *A high-resolution version of this slide for use with the Virtual Microscope is available as an eSlide (VM00440).*

the proliferating tumor cells were monoclonal plasma cells, and this was consistent with an initial pathologic diagnosis of plasmablastic plasmacytoma versus myeloma.

To differentiate between these conditions, a systemic workup was done. A skeletal radiographic survey was obtained, and it showed no evidence of extraoral involvement on computed tomography of the chest, abdomen, and pelvis. Positron emission tomography with ^{18}F-FDG showed a hypermetabolic mandibular lesion (standard uptake value = 8.7), with a soft tissue component. Bone marrow biopsy was negative for malignancy, and laboratory analysis did not reveal anemia, hypercalcemia, or renal involvement. Assays