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Case Report

Plasmablastic lymphoma presenting as gingival growth in a HIV positive patient: A case report

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ABSTRACT

Plasmablastic lymphoma (PBL) is a rare variant of a diffuse B-cell lymphoma that is so named for its blastoid morphology and immunophenotype. It affects approximately 3% of all HIV patients. This report details a case of the plasmablastic lymphoma of the gingiva in a HIV positive patient. The tumor manifested as a large mass of the right lower alveolus, causing bony destruction and tooth mobility, clinically indicative of carcinoma. Histologic examination of the lesion revealed a lymphoid tumor with a high proliferation rate containing lymphoplasmacytoid cells that were reactive to the plasma cell marker CD138 with lambda chain restriction but not to CD20 or CD79a, consistent with plasmablastic lymphoma. Recognition of this entity is important, as it represents an HIV-associated malignancy that predominately involves the oral cavity, and may mimic Kaposi's sarcoma and has a poor prognosis.

1. Introduction

Infection with human immunodeficiency virus (HIV) results in a liability to opportunistic infections and malignancies, particularly Kaposi's sarcoma. Plasmablastic lymphoma (PBL) is a rare aggressive non-Hodgkin's B-cell lymphoma which occurs predominantly in HIV seropositive individuals and shows a predilection for the oral cavity [1]. Lesions typically affect the gingiva and palate, causing local soft tissue and hard tissue destruction. Despite this localized involvement, the prognosis of PBL is poor; most patients die within 2 years of initial clinical presentation [2]. We report an unusual case of PBL of the mandible in a HIV-positive man.

2. Case report

A 55-year-old HIV-positive male presented to the Outpatient Department with pain in the lower right second molar along with loosening of the same. The patient developed a painless swelling in the edentulous area after four months of dental extraction. Intraorally a swelling was noted in the socket of right mandibular molar. General physical examination revealed no cervical lymphadenopathy, and there was no evidence of clubbing, cyanosis, or anemia.

X-ray revealed a radiolucent unilocular well circumscribed lesion in the mandible in relation to right lower molar socket (Fig. 1). Contrast enhanced computed tomography scan showed a 2 cm × 2 cm homogeneously enhancing expansile lesion in the mandible with involvement of adjacent gingivobuccal sulcus (Fig. 2). Incisional biopsy of the gingival lesion was performed for histopathologic evaluation which was reported at a private center, as poorly differentiated carcinoma. The patient underwent segmental mandibulectomy with right supra-omohyoid neck dissection.

Gross examination revealed a 2 cm × 2 cm grayish white growth involving the gingivobuccal sulcus and infiltrating into the underlying mandible. Histopathological examination of the resected mandible showed sheets of large neoplastic cells with abundant dense eosinophilic to amphophilic cytoplasm and centrally or eccentrically placed nuclei with single prominent nucleoli or several small nucleoli (Figs. 3 and 4). The mitotic rate was brisk, averaging 10 mitotic figures per 10 high power field. Immunohistochemistry was strongly and diffusely positive for CD38, CD138, Vimentin and Epithelial membrane antigen (EMA) and negative for pancytokeratin, leukocyte common antigen (LCA), CD19, CD79a, CD20, CD30, CD10, Bcl6, CD56, ALK-1 and kappa light chain. The tumor cells showed lambda chain restriction (Fig. 5). The

☆ AsianAOMS: Asian Association of Oral and Maxillofacial Surgeons; ASOMP: Asian Society of Oral and Maxillofacial Pathology; JSOP: Japanese Society of Oral Pathology; JSOMS: Japanese Society of Oral and Maxillofacial Surgeons; JSOM: Japanese Society of Oral Medicine; JAMI: Japanese Academy of Maxillofacial Implants.

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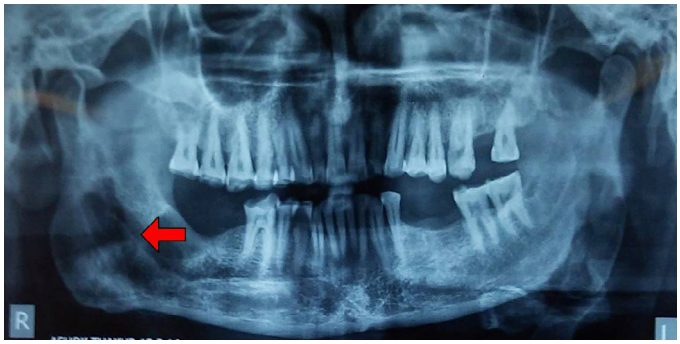

Fig. 1. Panoramic radiograph showing radiolucent unilocular well circumscribed lesion in the mandible.

blastic morphology and plasma cell-like immunophenotype features helped to establish a diagnosis of plasmablastic lymphoma. The resected lymph nodes showed evidence of granulomatous inflammation. No acid fast bacilli or caseous necrosis was noted.

His CD4 cell count was 300/mm^3. Further staging workup including bone marrow aspirate and biopsy did not reveal any evidence of plasma cell dyscrasia or metastatic deposit of PBL. No other evidence of metastatic disease was present. Laboratory studies showed normal chemistries, mildly elevated serum lactate dehydrogenase at 225 IU/L [normal < 190 IU/L] and normal serum beta-2 microglobulin. Serum and urine protein electrophoresis and immunofixation showed no evidence of monoclonal gammopathy.

The patient was put on CHOP (cyclophosphamide, vincrisrtine, doxorubicin and prednisolone) regimen and excellent response was noted to the therapy.

3. Discussion

Non-Hodgkin Lymphoma (NHL) is the second most common HIV-associated tumor after Kaposi's sarcoma, arising in approximately 3% of individuals with HIV disease [3]. Typically, HIV-associated lymphomas present with widespread disease, a predilection for extranodal sites and involve head and neck regions in 50–60% of cases [2,4]. The gingiva and palate are the most commonly affected sites, although lesions may occur in other sites [5,6]. Most HIV-related oral NHLs are B-cell tumors [3].

Plasmablastic lymphoma is a rare and rapidly progressive type of diffuse large B-cell lymphoma that was originally reported exclusively in the jaw and oral mucosa of male-predominant HIV-positive patients [7]. Oral NHL may manifest itself as ulcerated, exophytic mass, early loss or mobility of teeth, delayed healing of extraction sites, or trigeminal neuropathy [3]. Oral PBL lesions are often described as localized, rapidly expansile neoplastic masses that can infiltrate adjacent alveolar and craniofacial bone [1]. This was similar to our case which demonstrated adjacent mandibular erosion.

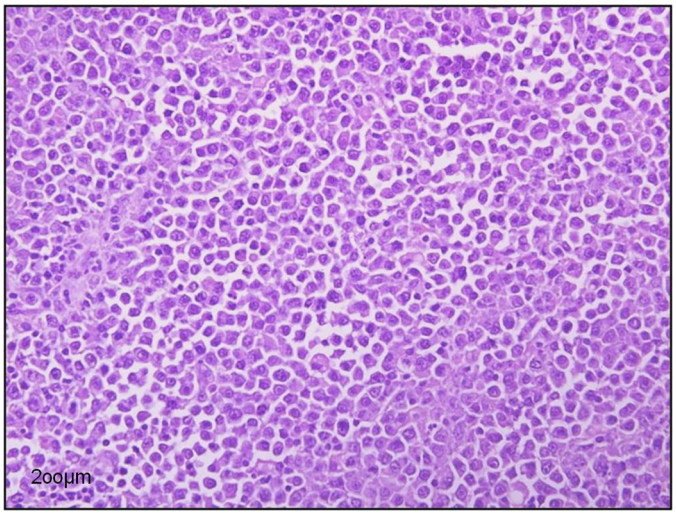

Fig. 3. Diffuse effacement of the gingiva by sheets of large neoplastic cells (H&E, 200×).

Discriminating plasmablastic lymphoma from other AIDS-related lymphomas relies upon both histopathologic and immunocytochemical characteristics. By morphology alone, the differential diagnosis of these tumors includes poorly differentiated carcinoma, lymphoblastic lymphoma, anaplastic plasmacytoma, Burkitt's lymphoma (plasmablastic variant) and ALK1-positive large B-cell lymphoma [8].

PBL can be diagnostically challenging to separate from other lymphoproliferative disorders with plasmacytoid differentiation [9]. Plasmablastic lymphocytes are found in a high proportion in

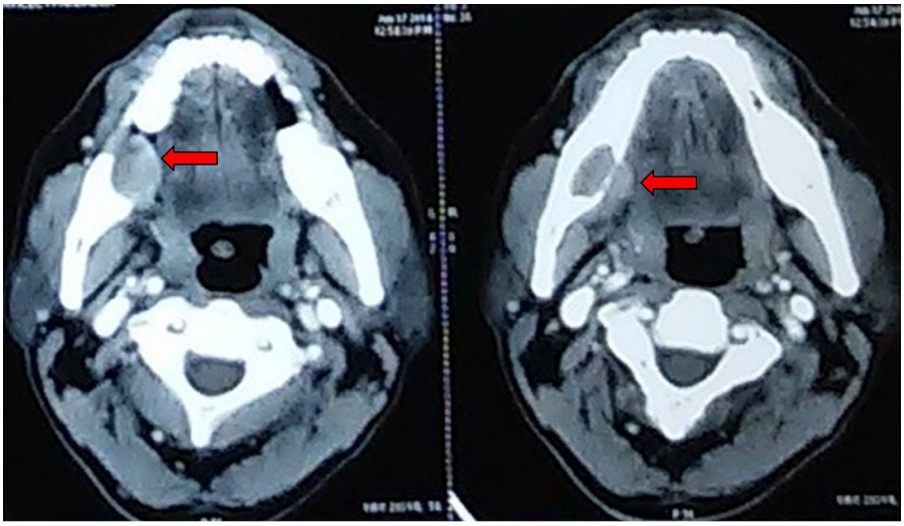

Fig. 2. Contrast enhanced computed tomography scan showed a homogeneously enhancing expansile lesion in the mandible with involvement of adjacent gingivobuccal sulcus.