A case of a single oral manifestation of plasmablastic lymphoma: an initial misdiagnosis

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TITLE PAGE

A case of a single oral manifestation of plasmablastic lymphoma: an initial misdiagnosis

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MANUSCRIPT

Key clinical message

The initial case presentation suggested an inflammatory epulis related to the periodontal inflammatory context, but the anatomopathological diagnosis showed a diagnosis of plasmablastic lymphoma. This single manifestation is a very rare diagnosis, but plasmablastic lymphoma occurs mainly in HIV+ patients. It is therefore an important differential diagnosis to be aware of.

CASE HISTORY

A 56-year-old patient was referred by the internal medicine department for oral swelling. Her medical history revealed human immunodeficiency virus (HIV) (undetectable viral load ; CD4 : 250/mm3), cirrhosis, and progressive multifocal leukoencephalopathy healed fifteen years ago. She was not taking any medication and had no allergies. Her general condition was unaffected. The general examination revealed no adenopathy and no signs of inflammation and infections on the skin or oral mucosa. She only presented an asymptomatic nodular pedicled lesion between two teeth, which had been growing for 2 months. There was no bleeding on contact. Oral hygiene is improvable with the presence of dental plaque and old treatments. The teeth were not mobile and responded positively to pulp vitality tests. (Figure 1)

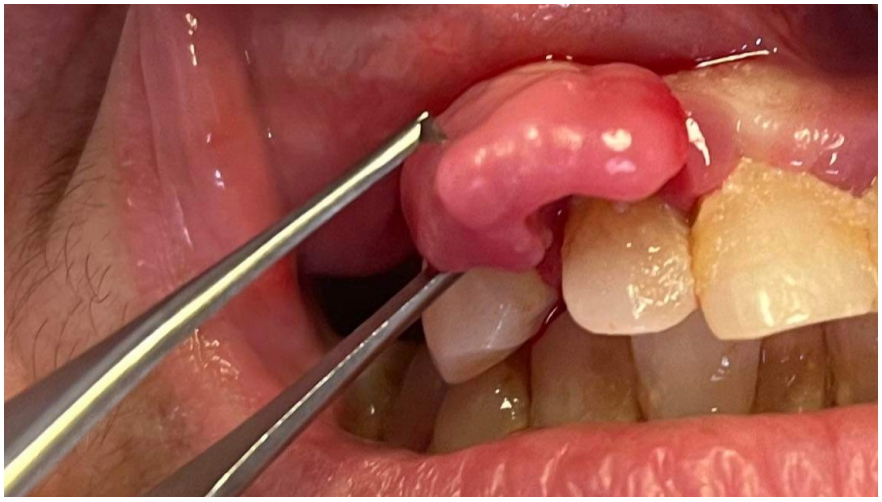

Figure 1 : a pedicled exophytic lesion, with no signs of inflammation. Dental plaque is present.

INVESTIGATIONS

The lesion was removed.

Histological pattern examination showed a massive infiltration of the oral mucosa by a lymphomatous tumour proliferation of diffuse architecture, made of cells with abundant eosinophilic cytoplasm and nucleated nuclei, numerous images of mitosis and surface ulcerations. (Figure 2)

On immunohistochemistry, the tumour cells expressed CD79a, CD3, CD138, MUM1, EMA, CD10 but no expression of CD20, PAX5, CD5, CD7, CD4, CD8, CD56, CD30, PS100, AE1-AE3.

The expression of c-Myc was strong and heterogeneous. CD5, CD7, CD4 and CD8 showed a predominantly CD8+ reactive T infiltrate. Chromogenic in situ hybridization with an EBER probe was positive. CISH with KAPPA/LAMBDA probes showed kappa monotypy.

The expression of EBV was positive whereas HHV-8 was negative.

The PET scan did not reveal any other location. Chemotherapy (bortezomib and epoch) was initiated.

1 year after, patient shows no disease progression and no side effects from chemotherapy

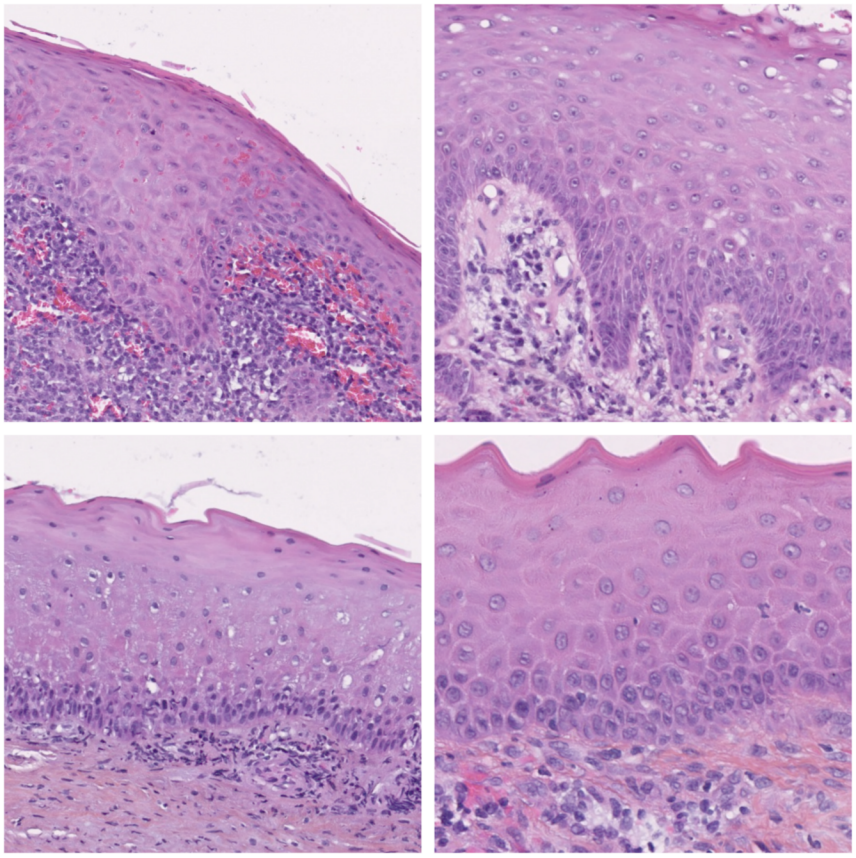

Figure 2 : Histological pattern examination showed a massive infiltration of the oral mucosa by a lymphomatous tumour proliferation of diffuse architecture, made of cells with abundant eosinophilic cytoplasm and nucleated nuclei, numerous images of mitosis and surface ulcerations.

Discussion

Plasmablastic lymphoma (PbL) is a rare and aggressive subtype of diffuse large B-cell non-Hodgkin's lymphoma with a poor prognosis. It was classified as a distinct type of lymphoma by the World Health Organization in 2000. (1)

In the oral cavity, PbL typically presents as an asymptomatic rapidly growing mass or swelling of the oral mucosa (12.4%), specifically the gingiva and palate, with or without ulceration and bleeding. (2)

Histologically, PbL is characterized by diffuse and a high index of proliferation with plasmablast infiltration. Histological features of PbL include frequent mitotic figures and tingible body macrophages that resemble a "starry sky". (3)

The prognosis for PbL is less than 50% at 2 years, with a median survival of 6 to 32 months. However, early management of isolated disease increases life expectancy.(3)

This case illustrates the importance of pathological examination of any lesion, even those that appear benign and without risk.

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Rios : Methodology, Validation, Visualization ; Charles Savoldelli : Methodology, Supervision, Validation ; Margaux Fricain : Writing - review & editing, Supervision, Validation

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None.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

CONSENT

I confirm that written patient consent has been signed and collected in accordance with the journal's patient consent policy, and that I will retain the original written consent form and provide it to the Publisher if requested

REFERENCES

1. Bhatt R, Desai DS. Plasmablastic Lymphoma. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 [cité 10 mai 2023]. Disponible sur: http://www.ncbi.nlm.nih.gov/books/NBK532975/2. Rodrigues-Fernandes CI, de Souza LL, Santos-Costa SFD, Silva AMB, Pontes HAR, Lopes MA, et al. Clinicopathological analysis of oral plasmablastic lymphoma: A systematic review. J Oral Pathol Med. nov 2018;47(10):915-22. 3. Bailly J, Jenkins N, Chetty D, Mohamed Z, Verburgh ER, Opie JJ. Plasmablastic lymphoma: An update. Int J Lab Hematol. sept 2022;44 Suppl 1(Suppl 1):54-63.