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HIV-Associated Oral Kaposi Sarcoma: Case Report

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Abstract | **Case Report**

Background: Kaposi sarcoma (KS) is an HIV-defining vascular tumor that may initially present in the oral cavity and mimic other vascular lesions, making biopsy essential for diagnosis. ***Case presentation:*** A 47-year-old man presented with a 1-month history of a progressively enlarging red nodule on the right buccal mucosa. Clinical examination revealed multiple painless angiomatous papules on the right vestibule. One month later, lesions had spread, becoming diffuse bluish-violaceous nodules on the oral mucosa, associated with cervical and inguinal lymphadenopathy, violaceous skin plaques on the limbs and trunk, and chronic diarrhea. Oral biopsy suggested vascular proliferation, while skin biopsy confirmed Kaposi sarcoma. HIV serology was positive, establishing HIV-associated KS. Combination antiretroviral therapy was initiated, with additional local or systemic treatment considered according to disease burden ***Discussion:*** Oral KS can progress from flat, asymptomatic red-to-purple lesions to papules and nodules that may ulcerate or bleed and impair oral function; the palate, gingiva, and tongue are commonly affected, with buccal mucosa and vestibule involvement less frequent but observed in this case. Differential diagnoses include bacillary angiomatosis, hemangioma, pyogenic granuloma, inflammatory or drug-induced gingival enlargement, melanoma, lymphoma, and leukemia. ***Conclusion:*** Early recognition of atypical oral vascular lesions can expedite HIV testing and treatment initiation in HIV-associated KS.

Keywords: Oral Kaposi sarcoma, VIH, AIDS, vascular tumor, case report.

INTRODUCTION

Kaposi sarcoma (KS), an AIDS defining condition, remains one of the most commonly HIV-associated neoplasms, it is a well-known vascular tumor first described by Moriz Kaposi in 1872. Four clinicopathologic types of KS have been identified[1]. Oral involvement may occur in all types but is most frequently observed in AIDS-KS. It has been estimated that in 22% of human immunodeficiency virus (HIV)-infected patients with KS, the oral mucosa is the initial site of clinical disease, which in some cases remains confined to the mouth[2]. Such cases highlight the crucial role of the oral cavity in the early diagnosis of HIV infection and underscore the need for clinicians to recognize and differentiate oral KS from other mimicking lesions.

CLINICAL FINDINGS

A 47 years-old male patient with a 1-month history characterized by the progressive appearance of a red nodule on his mucosal surface of the right cheek. On physical examination multiple red, painless papules were evidenced on the right buccal vestibule. No other similar lesions in any other region of the body were detected. A biopsy of the papules was performed. The histopathological findings were consistent with a lesion suggestive of vascular proliferation. Routine blood tests, were within normal limits.

One month later, the patient returned with progression of the nodules, which had become bothersome, along with newly developed lymphadenopathy. Clinical examination revealed diffuse multinodular bluish, angiomatous lesions on the right vestibule and on the inner surface of the right cheek, painless on palpation and does not blanch on diascopy (fig.1)

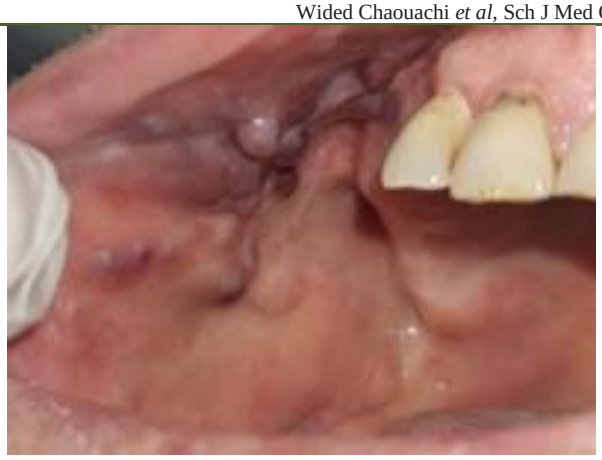

Figure 1: Multiple angiomatous nodules on the vestibule and the inner surface of the right cheek.

General examination showed bilateral, painless cervical lymphadenopathies measuring about 2 cm(fig.2), as well as multiple violaceous, angiomatous plaques and nodules on the arms (fig.3).

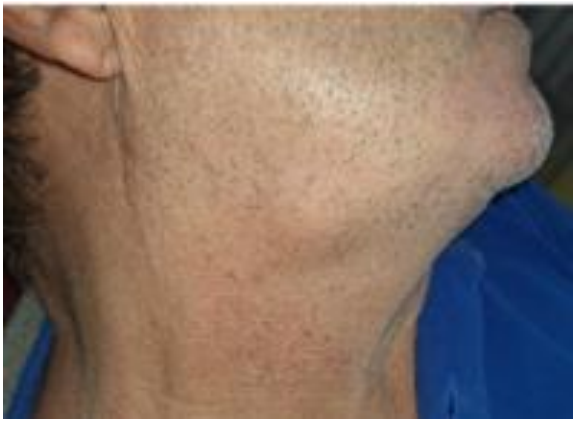

Figure 2: cervical lymphadenopathies

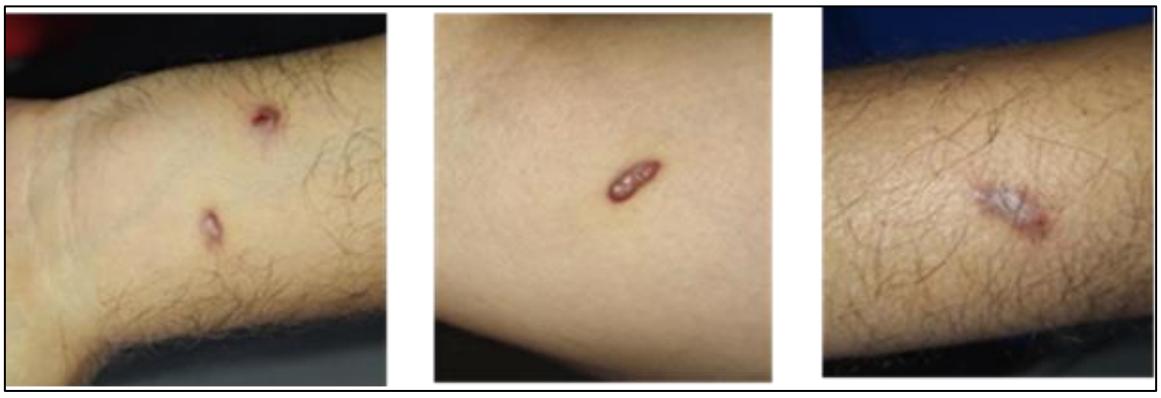

Figure 3: numerous violaceous, angiomatous plaques and nodules on the arms

On further questioning, the patient reported similar nodules on the trunk and legs, together with inguinal lymphadenopathies and diarrhea persisting for 2 months. At this stage, a systemic disease was suspected, including lymphoma or HIV infection, and the patient was referred to the infectious diseases department for further evaluation. Biopsy of the cutaneous lesions confirmed Kaposi's sarcoma, and HIV serology was positive. Consequently, the diagnosis of HIV-associated Kaposi's sarcoma was established, and antiretroviral triple therapy was initiated.

DISCUSSION

Kaposi's sarcoma corresponds to a malignant neoplasm associated with human herpesvirus type 8 (HHV-8). It is an angioproliferative, multicentric disease of endothelial origin, with a fairly heterogeneous pathogenesis and clinical expression and a type of growth that is directly related to the host's immune response [3].

Four epidemiologic subtypes of KS have been identified. This includes endemic KS seen among adults and children in sub-Saharan Africa, iatrogenic KS observed in those with who have received organ transplantation, epidemic KS is associated with HIV, and finally a subtype described in 2008 among men sleeping with men (MSM) who are HIV-negative. In our case, it is the epidemic type of KS[1]. Oral involvement occurs most commonly in AIDS-KS, followed by endemic, then iatrogenic and least commonly in classic KS. The mouth may be the initial site of presentation of KS in HIV-positive subjects[4].

KS lesions in the mouth may be indolent or rapidly progressive and fulminant. It begins as a reactive hyperplastic anti-inflammatory reaction and an angiogenic process that evolves into a sarcoma. The clinical appearance may vary depending on the duration of the lesion. Initially, the lesions tend to be flat and asymptomatic, where the color transitions from red to purple. Although they may resemble an ecchymosis, vitropressure is negative. They may also present as irregular, wine-red increases in volume and may progress to papules, nodules or ultimately to exophytic masses which when they reach a considerable size can cause facial deformity and alterations in mastication, swallowing and phonoarticulation[5]. They can ulcerate as a result of masticatory trauma, be painful, and may even bleed when stimulated. Advanced nodular exophytic lesions harbour higher HHV8 loads than do early maculopapular lesions[6].

It is most frequently located on the palate, gums and back of the tongue, in our case it is a rare presentation on the internal mucosa of the cheek and the vestibule. KS is recognized as an AIDS-defining neoplasm in HIV-infected individuals.

Additionally, there are histological similarities between cutaneous and oral KS lesions. Numerous tiny, aberrant vessels that dissect tissues are an indicator of KS at its early macular stage. Larger ectatic vessels may even be encircled by ramifying proliferating vessels, which would be a distinctive histological promonitory indication. Spindle cell growth and further blood vessel proliferation occur during the plaque stage of KS. The main components of well-developed KS are fascicles of spindled tumor cells with variable numbers of extravasated erythrocytes, chronic inflammatory cells, and macrophages loaded with hemosiderin. Necrosis, many mitotic figures, and noticeable cellular pleomorphism are not seen in typical KS lesions [7].

Using immunohistochemistry, KS lesional cells stain positively for the endothelial marker's factor VIII-related antigen, CD31 and CD34. Following endothelial cell conversion to a lymphatic phenotype, KS spindle cells also exhibit the expression of lymphatic-specific markers as Prox 1, LYVE-1, VEGFR-3, and D2-40. However, the most diagnostically useful way to distinguish KS from its mimics is to use the commercially available antibody LNA-1 to identify HHV8 among KS lesional cells. In KS cells, LNA-1 antibody manifests as stippled nuclear staining.

A definitive diagnosis of oral KS requires biopsy, as its clinical presentation may mimic bacillary angiomatosis, haemangioma, pyogenic granuloma, inflammatory gingival enlargement, drug-induced gingival hyperplasia, or certain malignancies such as melanoma, lymphoma, and leukaemia.

Treatment can be local, regional or systemic: therapeutic abstention, local intervention, sclerosing agent injection under the lesions, radiotherapy, interferon alpha, chemotherapy (bleomycin). Various therapeutic protocols and various classifications have been proposed. However the first-line treatment must consists in initiating antiretroviral tritherapy, which results in complete healing in a majority of patients within 3 to 6 months, persisting for months or years[8].

CONCLUSION

This case highlights the importance of recognizing oral Kaposi sarcoma as a potential early indicator of underlying HIV infection. Careful oral examination can provide valuable diagnostic clues, especially in patients without prior HIV diagnosis. Early identification of such lesions is crucial, as it allows prompt initiation of appropriate investigations, timely antiretroviral therapy, and better overall prognosis.

REFERENCES

1. Radu O, Pantanowitz L. Kaposi sarcoma. Arch Pathol Lab Med. févr 2013;137(2):289-94.
2. Feller L, Lemmer J. Insights into pathogenic events of HIV-associated Kaposi sarcoma and immune reconstitution syndrome related Kaposi sarcoma. Infect Agent Cancer [Internet]. 21 janv 2008 [cité 18 sept 2025];3:1. Disponible sur: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2265259/
3. Patton LL. Oral lesions associated with human immunodeficiency virus disease. Dent Clin North Am. oct 2013;57(4):673-98.
4. Gorsky M, Epstein JB. A case series of acquired immunodeficiency syndrome patients with initial neoplastic diagnoses of intraoral Kaposi's sarcoma. Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology, and Endodontology [Internet]. nov 2000 [cité 6 sept 2025];90(5):612-7. Disponible sur: https://linkinghub.elsevier.com/retrieve/pii/S1079210400434530
5. Ficarra G, Berson AM, Silverman S, Quivey JM, Lozada-Nur F, Sooy DD, et al. Kaposi's sarcoma of the oral cavity: a study of 134 patients with a review of the pathogenesis, epidemiology, clinical aspects, and treatment. Oral Surg Oral Med Oral Pathol. nov 1988;66(5):543-50.

6. Kaposi`s sarcoma herpesvirus load in biopsies of cutaneous and oral KS lesions | Request PDF. ResearchGate [Internet]. 6 août 2025 [cité 17 sept 2025]; Disponible sur:https://www.researchgate.net/publication/6210028_Kaposis_sarcoma_herpesvirus_load_in_biopsies_of_cutaneous_and_oral_KS_lesions
7. (PDF) Kaposi's Sarcoma: Demographic and Clinical Features, Histopathology, Treatment, and Outcomes in a 10-Year Lisbon Hospital Study. ResearchGate [Internet]. 21 août 2025 [cité 17 sept 2025]; Disponible sur: https://www.researchgate.net/publication/392874817_Kaposi's_Sarcoma_Demographic_and_Clinical_Features_Histopathology_Treatment_and_Outcomes_in_a_10-Year_Lisbon_Hospital_Study
8. Patel R, Lurain K, Yarchoan R, Ramaswami R. Clinical management of Kaposi sarcoma herpesvirus-associated diseases: an update on disease manifestations and treatment strategies. Expert Rev Anti Infect Ther [Internet]. 2023 [cité 10 sept 2025];21(9):929-41. Disponible sur: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10529793/