



How do I diagnose *Microscopic challenge: Kaposi Sarcoma of the oral mucosa*

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Differential diagnoses: Mucosal ulceration with granulation tissue

Abstract

Kaposi Sarcoma is a rare vascular neoplasm of the skin and mucosal membranes associated with human herpes virus 8 (HHV-8) infection. It is usually associated with severe suppression of the immune system, e. g. in the setting of human immune deficiency virus (HIV) infection and acquired immune deficiency syndrome (AIDS). Here we present a case of a 33 year old female, who was diagnosed to be HIV-positive in March 2015. On physical examination, petechial bleedings were recognized at the hard palate. The biopsy specimen showed an ulcerated squamous mucosa with granulation tissue. Single swollen endothelia within angulated vessels were suspicious for a vascular tumor. Immunohistochemical evaluation revealed proliferating endothelia positive for HHV-8. Thus, the diagnosis of a Kaposi Sarcoma within granulation tissue at the hard palate was made. The diagnosis of Kaposi Sarcoma can be very difficult, especially in the setting of concurrent inflammation. Immunohistochemical workup is therefore recommended and necessary to verify the diagnosis of Kaposi Sarcoma.

Virtual Slides: www.diagnosticpathology.eu/vs/2015_1_73/

Anamnesis / History

33 year old female, who was first diagnosed to be HIV positive in March 2015. She was suspected to suffer from disseminated tuberculosis. On physical examination a generalized lymphadenopathy was evident.

Gross - microscopic findings



Macroscopically, the lesion was located at the hard palate and presented with petechial bleeding.

Microscopy

Microscopic examination of the biopsy specimen revealed a granulating inflammation underneath an ulcerated squamous mucosa. Though most capillaries were typically directed to the surface, focally swollen endothelia and angulated vessel with adjacent signs of bleeding were suspicious for a neoplastic vascular formation. On immunohistochemical workup, CD34 was used to analyse vascular architecture, which was focally disturbed with swollen endothelia. These were proliferatively active in the MIB-1/KI-67 stain and showed nuclear expression of HHV-8 antigen.

Expression of markers

CD34 +, MIB-1 +, HHV-8 +, CK -

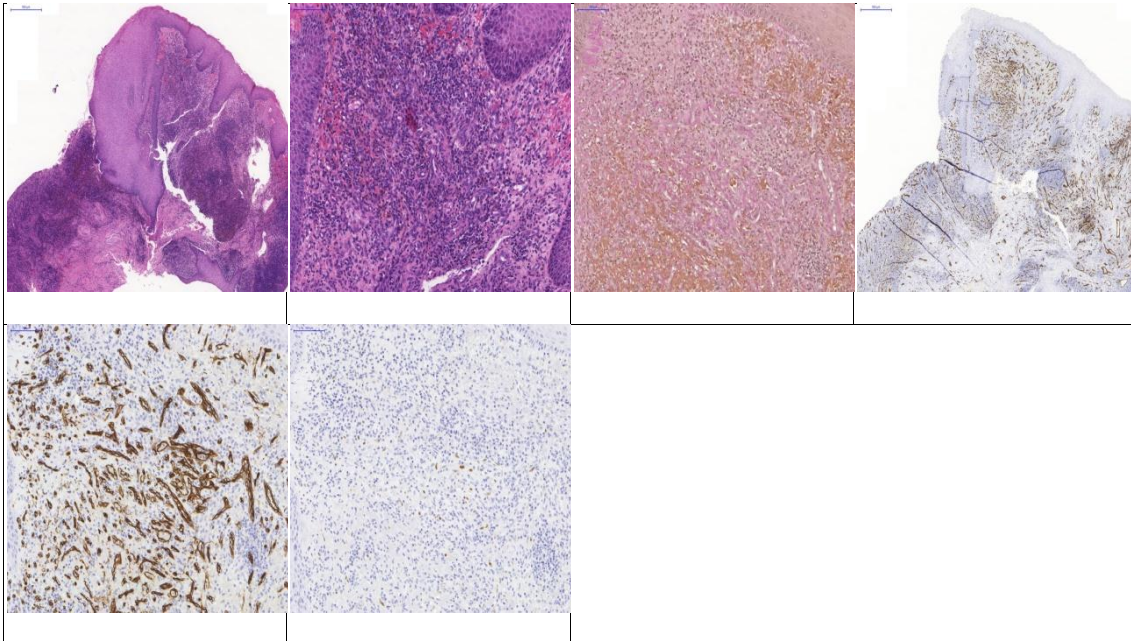
Discussion

Though a rare entity in the common population, Kaposi sarcoma can frequently be observed in HIV positive patients, typically located in the skin. Mucosal lesions are observed only in a minority of patients. In the presented case, macroscopic as well as microscopic findings were unusual as well, since physical examination showed petechial mucosal bleeding and histologically an ulceration of squamous epithelium with granulation tissue was observed. Only focally bended capillaries with swollen endothelia could be seen which proved to be HHV-8 positive, verifying Kaposi sarcoma within the granulation tissue. Distinction between these two diagnoses, ulcerating granulation tissue and Kaposi sarcoma, especially at early stage, is a morphological challenge. In HIV positive patients, skin and mucosal lesions therefore need careful microscopic evaluation including immunohistochemical workup. Particularly, stains for the assessment of vascular architecture (e. g. CD34) are pivotal.

Hallmarks of Diagnosis

Irregular and angulated capillaries with swollen endothelia, typically HHV-8 positive in immunohistochemical workup.

Images (for full size images see supplements)



Keyword - Diagnosis: [Kaposi sarcoma](#)

Keyword - differential diagnosis: [granulation tissue](#)

Keyword - side findings: [human herpes virus 8](#)

Keyword - organ: [oral mucosa](#)

Keyword - methods: [immunohistochemistry](#)

Keyword - others: [human immune deficiency virus](#)

Online References (PubMed)