

Bilateral eyelid Kaposi's sarcoma: a case report

Saiko M¹, Agrippa FM¹, Rudo MM²

¹University of Zimbabwe, Department of Ophthalmology, PO Box A178 Avondale, Harare, Zimbabwe

²University of Zimbabwe, Department of Pathology, PO Box A178 Avondale, Harare, Zimbabwe

Corresponding author: Dr Saiko Mangombe, Department of Ophthalmology, University of Zimbabwe, PO Box A178 Avondale, Harare, Zimbabwe. Email: drmangombe@gmail.com

ABSTRACT

Kaposi's Sarcoma (KS) is a generalized angio-sarcoma caused by the Human Herpes Virus type 8 (HHV-8). Infection by the Human Immunodeficiency Virus (HIV) has been shown to predispose to the development of KS. The commonest location of KS lesions include the skin of the lower limbs, hard palate and gastrointestinal system, lymph nodes and lungs. The occurrence of KS on the eye is considered rare. We report a case of a 45 year old HIV positive female patient who presented with bilateral eyelid KS as the first manifestation of systemic KS. Excisional biopsies were done on both eyelids. The histology showed fascicles of spindle cells and extravasation of red blood cells. A histological diagnosis of bilateral eyelid KS was made.

Key words: Eyelid, Kaposi's sarcoma, Human Herpes Virus type 8, Human Immunodeficiency Virus, Chemotherapy, Highly Active Antiviral Therapy.

INTRODUCTION

Kaposi's Sarcoma (KS) has been associated with immunosuppression secondary to HIV infection and had been considered an AIDS defining illness¹. It is caused by the Human Herpes Virus 8 infection (HHV-8)². It is a systemic disease which can present with isolated muco-cutaneous lesions commonly gastrointestinal, pulmonary and skin of the lower limbs³. Presentation on the eyelid as the first manifestation of systemic KS is rare⁴. Eyelid KS is associated with eyelid mechanical ptosis, cosmetic disfigurement and eyelid or eyelash malposition⁵.

CASE REPORT

We present a case of a 45 year old female patient who presented with a four month history of right upper eyelid mass and two months history of a left lower eyelid mass. This patient was diagnosed HIV positive one year prior to the development of the eyelid growths with a CD4+ count of 100 cell/ul. She was taking Highly Active Anti-viral Therapy (HAART) with no history of defaulting.

On general examination, the patient looked stable and was not in respiratory distress and had normal vital signs. There was a red-purplish nodule on the back of her right thigh which clinically looked like a KS lesion but there were no palatal KS lesions seen (Figures 1A and 1B). On ocular examination, the patient had a right upper eyelid mass which looked red-purplish, was ulcerated at the center and there was crusting and hyperpigmentation on its surface. There was mechanical ptosis with the lower border of the mass

almost reaching the lower eyelid surface. The mass spanned lateral two thirds of the right upper eyelid with involvement of the lid margin. There was also a similar smaller round mass on the left lower eyelid measuring approximately 3mm in widest diameter (Figures 2A and B).



Figure 1: Skin examination revealed a single KS nodule on the right lower limb but there was no palatal KS



Figure 2: Right red-purplish upper eyelid mass with central ulceration. The surface of the mass was crusting and hyperpigmentation was present. Note mechanical ptosis. A left lower eyelid mass is also present

The rest of the ocular examination in both eyes was normal. A working diagnosis of bilateral eyelid Kaposi's sarcoma was made and the differential diagnosis included:

- Squamous cell carcinoma
- Basal cell carcinoma
- Sebaceous gland carcinoma.

Excisional biopsies were taken aiming for a free margin. Primary closure of the eyelid defect was achieved by apposition of the lid margins and suturing with silk. Figure 3 shows appearance post operatively.



Figure 3: Post-surgery appearance

The histology of the two biopsies from both eyes showed a vasoformative spindle cell lesion with red cell extravasation in keeping with Kaposi's sarcoma. In addition to HAART, the patient was also started on chemotherapy for KS to achieve disease control.

DISCUSSION

Kaposi's sarcoma is a very chemo-sensitive tumour and lesions typically disappear within a few weeks after onset of chemotherapy⁶. Kaposi's sarcoma has been associated with low CD4 counts in HIV patients⁷ and initiation of HAART has been successfully proven as one adjunct to the treatment of Kaposi's sarcoma⁸.

Surgery has been shown to play an important part in the management of eyelid KS in the setting of; cosmetically disturbing lesions, discomfort, and obstruction of vision from tumour bulk⁹. Surgical excision has been recommended to prevent entropion formation with trichiasis and exposure keratopathy and corneal ulcer⁹⁻¹¹. The presented case had gross mass effect with mechanical ptosis and cosmetic disfigurement and areas of sepsis. Mangombe⁵ also reported a case of eyelid KS which was managed successfully by surgical excision followed by chemotherapy and HAART⁵ (Figure 5). Eyelid excision of KS was also supported for solitary eyelid lesions¹².

It can be concluded that gross eyelid KS lesions can be treated surgically. The advantages of surgery include tumour excision, removing the cosmetic disfigurement and potential source of infection and allows for a biopsy to be taken for histological diagnosis to be made. Some disadvantages of surgical treatment include potential complications like lid scarring and

notching, entropion and ectropion which may warrant another surgical correction later⁵.



Figure 5: Eye lid KS managed surgically (A&B pre-op C&D post-op) (Mangombe, 2017)⁵

CONCLUSION

Surgery has a place in the management of large disfiguring Kaposi's sarcoma lesions of the eyelid. Eyelid Kaposi's sarcoma can present as the first manifestation of systemic Kaposi's sarcoma.

Declaration: Informed consent for publishing the case report, including the pictures was obtained.

REFERENCES

1. Millet A, Singh S, Gittens-Backus G, Dang KA, Shokrani B. An unusual case of invasive Kaposi's sarcoma with primary effusion lymphoma in an HIV positive patient: case report and literature review. *Case Rep Oncol Med*. 2015; **2015**: 789616.
2. Teixeira AI, Neno M, Badura R, Borges-Costa J, Filipe PL. Kaposi sarcoma of the eyelid as an initial manifestation of AIDS. *Dermatol Online J*. 2016; **22**(7): 3030/qt2jw6t7cs.
3. Restrepo CS, Martinez S, Lemos JA, Carrillo JA, Lemos DF, Ojeda P, *et al*. Imaging manifestations of Kaposi sarcoma. *Radiographics*. 2006; **26**(4): 1169-85.
4. Pantanowitz L, Dezube BJ. Kaposi's sarcoma in unusual locations. *BMC Cancer*. 2008; **8**: 190.
5. Mangombe S. Eyelid Kaposi's sarcoma. *SA J Ophthalmol*. 2017; **12**(3): 13-15.
6. Schneider JW, Dittmer DP. Diagnosis and treatment of Kaposi sarcoma. *Am J Clin Dermatol*. 2017; **18**(4): 529-539.
7. Crum-Cianflone NF, Hullsiek KH, Ganesan A, Weintrob A, Okulicz JF, Agan BK. Is Kaposi's

- sarcoma occurring at higher CD4 cell counts over the course of the HIV epidemic? *AIDS*. 2010; **24**(18): 2881-83.
8. Curtiss P, Strazzulla LC, Friedman-Kien AE. An update on Kaposi's sarcoma: Epidemiology, pathogenesis and treatment. *Dermatol Ther* (Heidelb). 2016; **6**(4): 465-470.
 9. Jacqueline Freudenthal *et al*. Ophthalmologic manifestations of Kaposi's sarcoma treatment and management, <https://emedicine.medscape.com/article/1197815-treatment#d8>, Medscape, 2019.
 10. Dugel PU, Gill PS, Frangieh GT, Rao NA. Treatment of ocular adnexal Kaposi's sarcoma in acquired immune deficiency syndrome. *Ophthalmology*. 1992; **99**(7):1127-32.
 11. Kalinske M, Leone CR Jr. Kaposi's sarcoma involving eyelid and conjunctiva. *Ann Ophthalmol*. 1982; **14**:497-499.
 12. Dammacco, R., L. Lapenna, *et al*. Solitary eyelid Kaposi sarcoma in an HIV-negative patient. *Cornea*. 2006; **25**(4): 490-492.