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CASE STUDY

Non AIDS Kaposi's Sarcoma Leading to Lower Extremities Wounds, Case Presentations and Discussion

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Abstract Kaposi's sarcoma (KS) is a rare malignancy that with the onset of the AIDS epidemic suggests a link between the development of disease and a transmissible agent. It is a low-grade vascular tumor associated with infection with the human herpes virus 8 (HHV-8). The first case presents a non-HIV patient with Kaposi's sarcoma of the left foot and the second case is a kidney transplant patient on immunosuppressive medications with wounds on the right leg due to non-HIV Kaposi's sarcoma.

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Introduction

Kaposi's sarcoma (KS) is a rare malignancy prior to the advent of the AIDS epidemic that suggests a link between the development of disease and a transmissible agent. It is a low-grade vascular tumor associated with infection with the human herpes virus 8 (HHV-8). The first case we present is a non-HIV patient with Kaposi's sarcoma of the left foot and second case, is a kidney transplant patient on immunosuppressive medications with wounds on the right leg caused by Kaposi's sarcoma.

Case Report 1: Bleeding Plantar Kaposi's Sarcoma of the Left Foot

A 90 year-old female presented to urgent care for profuse bleeding from her left plantar foot lesion, with a history of KS in the past affecting the other foot. The patient had noted

purplish lesions over her right second and third toes several months to years ago with no pain, itching or bleeding. The lesions were biopsied by a podiatrist and histopathology confirmed KS with immunohistochemical stains positive for HHV-8. Patient's HIV test was negative. Review of systems included ocular, ENT, neck, respiratory, cardiac, GI, GU, dermatologic, neurologic, rheumatologic and vascular were negative. Patient was on Aricept, Synthroid, Mevacor, Prin-zide and Aspirin. Patient was a widow, drinks rarely and does not smoke. On examination, there were multiple KS lesions on her right foot, the third and fourth toes (**Figure 1**), a round lesion on her plantar left forefoot (**Figure 2**). Treatment options were discussed with patient who elected to have the problematic bleeding Kaposi plantar lesion excised with a full-thickness skin graft (FTSG) under local monitored anesthesia care. The patient did well post operatively with wounds healed. **Figure 3** shows a healed plantar forefoot wound. One month later she was able to ambulate on her grafted wound. Patient will probably need other surgical excision of her other Kaposi lesions if they become problematic.

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Figure 1 KS lesions on right foot, third and fourth toes.

Figure 3 Healed plantar left forefoot wound.

Case Report 2: Right Leg Circumferential Wounds Due to Extensive Kaposi's Sarcoma in a Kidney Transplant Patient on Immunosuppressive Medications

The patient is a 60 year old male who was admitted to an acute long term care (ALTC) facility with chronic non-healing wounds on his right leg (Figure 4). These wounds were first misdiagnosed for chronic venous insufficiency wounds. Due to the chronic nature of these wounds a biopsy was performed and Kaposi's sarcoma was diagnosed. The treatment was palliative in nature and consisted of keeping these wounds clean and free of infection. A silver impregnated alginate dressing was started along with gentle compression therapy to help control the edema.

Discussion

The epidemiology of KS suggested a link between the development of disease and a transmissible agent. In 1994, a

novel gamma herpes virus was subsequently identified in KS biopsies.¹ KS are classified into four groups based on the following clinical settings; *Classic*: rare, indolent cutaneous proliferative disease, which primarily affects older men of Mediterranean and Jewish origin.^{2,3} *Endemic or African*: found in all parts of equatorial Africa, particularly in sub-Saharan Africa, not typically associated with immune deficiency.^{4,5} *Iatrogenic or organ transplant-associated*: occur after solid organ transplantation, presumably due to the immunosuppression with the transplant itself which may transmit the HHV-8 infection.^{6,7} *AIDS-related or epidemic*: the most common tumor arising in HIV-infected persons, over 20,000 times more common than the general population and over 300 times more than in other immune-suppressed hosts, such as renal transplant recipients.⁸ It has been noted that there are links of the HPV virus with those who develop non AIDS Kaposi's sarcoma.⁹ Skin involvement is characteristic but extra-cutaneous spread of KS is common,

Figure 2 KS round lesion on the plantar aspect of the left forefoot.

Figure 4 Right leg KS wounds.

particularly to the oral cavity, gastrointestinal tract, and the respiratory tract. The cutaneous lesions appear most often on the lower extremities, face (especially the nose), oral mucosa, and genitalia. Lesions are often elliptical and may be arranged in a linear fashion along the skin tension lines and may be symmetrically distributed. The lesions are not painful or pruritic and usually do not produce necrosis of overlying skin or underlying structures.¹⁰ The major goals of treatment are symptom palliation, prevention of disease progression and shrinkage of tumor to alleviated edema, organ compromise and psychological stress.¹¹ Highly active antiretroviral therapy (HAART) is recommended for virtually all patients with AIDS-related KS. The need for treatment beyond HAART and the choice among the options depend upon the extent of the disease, the rapidity of tumor growth, the HIV-1 viral load, and the CD4 cell count, and the overall medical patient's medical condition.¹² Local therapies are modalities that are useful for the management of symptomatic bulky KS lesions or for cosmetic reasons, but they do not prevent the development of new lesions in untreated area. Local therapies include, radiation therapy, intralesional chemotherapy, and topical alitretinoin. Other treatment consist of chemotherapy which is generally used for patients with more advanced disease or evidence of rapid progression, liposomal anthracyclines, taxanes and anti-HHV-8 therapy even though there are no specific anti HHV-8 therapies available.¹³⁻¹⁷

Conclusion

We presented a rare case of Kaposi's sarcoma in an elderly, non-HIV female patient with bleeding lesion on the plantar foot and another case of extensive ulcerated Kaposi's sarcoma in a patient with post kidney transplant on immunosuppressive medications. Most Kaposi's sarcomas are seen in HIV infected homosexual men, elderly men of Jewish or Mediterranean descent. A diagnosis of Kaposi's sarcoma can only be made by biopsy. Proper work up is needed and treatment options vary per patient.

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