

Advanced oral HIV-associated Kaposi sarcoma with facial lymphoedema as an indicator of poor prognosis

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Abstract

Rapidly progressive facial lymphoedema that develops concurrently with or immediately after rapid enlargement of oral Kaposi sarcoma in human immunodeficiency virus (HIV) -seropositive persons forebodes death. Previously, we reported on three patients with HIV-associated Kaposi sarcoma who had not been exposed to highly active antiretroviral therapy (HAART) and had extensive oral HIV-associated Kaposi sarcoma and rapidly increasing facial lymphoedema. They died within three weeks of developing facial lymphoedema. We present a similar case of an HIV-seropositive patient with extensive oral Kaposi sarcoma and associated facial lymphoedema. She died three weeks after developing facial lymphoedema. In contrast to our other previously reported cases, this patient had been on HAART for three months before she died. In light of this, we implore medical colleagues to treat patients with oral HIV-associated Kaposi sarcoma with HAART during the early maculopapular stage of Kaposi sarcoma. If the oral Kaposi sarcoma does not respond, as would be evident by the regression or disappearance of the lesions, then systemic chemotherapy should be added promptly, in order to prevent or delay the development of extensive exophytic oral lesions with facial lymphoedema. These appear to be indicative of a very poor prognosis.

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Introduction

In South Africa, human immunodeficiency virus (HIV) infection is widespread and HIV-associated Kaposi sarcoma is common.¹ In sub-Saharan Africa, HIV-associated Kaposi sarcoma frequently runs a rapidly progressive course. In the absence of highly active antiretroviral therapy (HAART), the disease is fatal.¹⁻⁴ HAART should be the first-line treatment for HIV-associated Kaposi sarcoma. This is because in the early stage of HIV-associated Kaposi sarcoma, it may bring about regression of established lesions and may prevent the development of new lesions.^{2,3,5-7} However, HAART alone is frequently ineffective against advanced HIV-associated Kaposi sarcoma. In such cases, HAART should be supplemented by systemic chemotherapy.^{2,8,9} Consequently, it is suggested that patients with extensive oral HIV-associated Kaposi sarcoma, or patients in the maculopapular stage of oral HIV-associated Kaposi sarcoma, should receive chemotherapy in addition to HAART. This might prevent or abort the ominous parallel development of severe oral HIV-associated Kaposi sarcoma with severe facial lymphoedema.^{3,4}

There have been previous reports that patients with extensive oral HIV-associated Kaposi sarcoma, who had not received HAART, died shortly after developing facial lymphoedema.^{3,4} This paper reports on a patient with extensive oral HIV-associated Kaposi sarcoma who received HAART, but nevertheless rapidly declined and died soon after developing facial lymphoedema.

Case report

A 33-year-old HIV-seropositive female, 32 weeks pregnant, with a CD4 T cell count of 68 x 10 cells/mm³, extensive cutaneous and oral HIV-associated Kaposi sarcoma lesions and severe lymphoedema of the face (Figures 1, 2 and 3) was referred to the oral medicine clinic at the Medunsa Oral Health Centre.

The patient had been diagnosed with HIV infection at a rural clinic five months previously and had started HAART (lamivudine, nevirapine and zidovudine) approximately two months later. Three weeks or so after starting HAART she developed oral and widespread cutaneous lesions that were diagnosed clinically and histopathologically as Kaposi



Figure 1: Extensive cutaneous HIV-associated Kaposi sarcoma lesions and severe lymphoedema of the face



Figure 2: Because of the widespread oral HIV-associated Kaposi sarcoma lesions and facial lymphoedema, the patient could not open her mouth to show the extent of the oral lesions

sarcoma. Despite being on HAART, the cutaneous and oral lesions became progressively worse.

Approximately one week prior to our examination, she developed rapidly increasing facial lymphoedema. On oral examination, the Kaposi sarcoma lesions were seen on the maxillary and mandibular gingivae and on the hard palate. The patient was in pain, could not eat and had difficulty speaking. In addition to the facial HIV-associated Kaposi sarcoma lesions, a Kaposi sarcoma lesion obstructed the external auditory meatus (Figure 3). Other symptoms were severe anaemia, marked thrombocytopenia, lymphopenia and neutrophilia.



Figure 3: HIV-associated Kaposi sarcoma lesions of the right ear

A week after our examination, the patient's seven-week premature baby was delivered by a Caesarean section. A week later, while systemic investigations were still in progress and before cytotoxic chemotherapy could be initiated, the patient died.

Discussion

Our patient had extensive cutaneous and oral lesions of HIV-associated Kaposi sarcoma and severe facial lymphoedema. We had no access to her medical records so it was not possible to determine whether or not her HIV-associated Kaposi sarcoma was an immune-reconstitution inflammatory syndrome.

Extensive oral lesions and lymphoedema are common features of advanced HIV-associated Kaposi sarcoma and are associated with poor prognosis.^{3,4,10} Oral HIV-associated Kaposi sarcoma harbours a higher human herpes virus-8 (HHV-8) load than cutaneous HIV-associated Kaposi sarcoma.¹¹ Also, advanced exophytic oral HIV-associated Kaposi sarcoma lesions carry a higher HHV-8 load than early maculopapular oral lesions.^{4,10,11} Therefore, it is probable that the high HHV-8 burden in advanced oral lesions with associated cytokine dysregulation promotes proliferation of regional lymphatic endothelial cells and impairs lymphatic drainage, with consequent leakage of protein-rich fluid into the facial interstitial spaces. This leads to the development of facial lymphoedema.^{3,4}

It is uncertain whether extensive oral HIV-associated Kaposi sarcoma and facial lymphoedema directly cause death, or

whether they are merely clinical features that are associated with severe immunosuppression and terminal illness. Although the death of our HIV-seropositive patient who was on HAART may or may not have been owing to HIV-associated Kaposi sarcoma, the concurrent progression of her oral HIV-associated Kaposi sarcoma and her facial lymphoedema certainly preceded her death.

It is evident that patients with advanced HIV-associated Kaposi sarcoma survive longer if they take HAART in combination with anti-Kaposi sarcoma chemotherapy, than if they are on HAART alone.^{8,12} It is also apparent that chemotherapy brings palliative benefits to these patients.⁹ Therefore, it is strongly recommended that advanced oral HIV-associated Kaposi sarcoma should be treated urgently with systemic chemotherapy, in addition to HAART,^{2,8,9} in the hope that regression of the oral lesions will result and that facial lymphoedema, with its ominous implications, may be avoided.

Furthermore, it may be prudent to treat the early maculopapular stage of oral HIV-associated Kaposi sarcoma with antiretroviral drugs and systemic chemotherapy in order to prevent or delay the development of extensive exophytic oral lesions and the subsequent facial lymphoedema, which seems to be an indicator of a poor prognosis.^{3,4,10}

For this reason, in South Africa, where the prevalence of HIV infection is high, and where oral HIV-associated Kaposi sarcoma is common¹³ and the likelihood of developing associated facial lymphoedema is considerable, regional healthcare facilities should develop a policy to administer chemotherapy to patients with advanced HIV-associated Kaposi sarcoma. The effects should be monitored.

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