Case Report

Kaposi's sarcoma associated with advanced HIV infection: A case report

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Abstract

Acquired immunodeficiency syndrome was recognized in the early 1980s. It was more common in men who had sex with previously healthy men and young people and were affected by atypical pneumopathy caused by an opportunistic microorganism, identified as *Pneumocystis carinii*, and presently known as *Pneumocystis jiroveci*. Histopathology of the purplish or brown nodular lesions revealed Kaposi's sarcoma (KS). KS is the most frequent neoplasm in patients with human immunodeficiency virus infection. Its pathophysiology has been associated with the presence of a herpes virus, whose etiologic agent is a member of herpes virus type 8 family, which gets transmitted through sexual contact. Here, we present a case report to present the diagnosis and bring the light of knowledge to the Dentist the need of therapeutic measures in the treatment of the pathology.

Keywords: Acquired immunodeficiency syndrome (AIDS), HAART, human herpes virus-8, Kaposi's sarcoma, stomatognathic manifestations

Introduction

Kaposi's sarcoma (KS) is associated with stage-3 human immunodeficiency virus (HIV) infection which is known as acquired immunodeficiency syndrome (AIDS). KS is the most common malignancy associated with AIDS.[1] KS is associated with patients under antiretroviral therapy, organ transplantation, or immunocompromised.[2]

In 1994, Chang and Moore underwent genetic investigation and discovered a new virus which they named as KS-associated herpes-virus (KSHV) which was also known as human herpesvirus 8 (HHV-8).[2] All KS contain viral DNA from HHV-8. Mode of transmission is sexual contact, organ transplantation, and maternal breastfeeding. It is common in homosexual partners.[3] Stomatognathic manifestations appear as macules, papules, or tumors to be violet or purple in color.[4] According to EC Clearinghouse classification, KS is one of the lesions which is strongly associated with HIV infection.[4] KS being one of the most common manifestations of HIV infection, primary health care physicians should be well aware of the stomatognathic manifestations, as it may help the physician to take universal precautions while treating the patient and treat under high-risk category with a specific protocol. The physician may be the first person to identify the disease and also help the patient know about the disease if the patient is unaware. Here, we report a case of a female patient suffering from HIV and is under highly active antiretroviral treatment (HAART) for 10 years and presents with the oral manifestation of KS.

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Case Report

A 40-year-old female patient reported to the dental OPD with chief complaint of pain in the lower right and left side of jaw since 2 months. Patient reported that she noticed multiple ulcerations in the attached and marginal gingiva on the right and left mandibular region since 14 months. Initially, ulcers healed by themselves, but with time the exacerbation of ulcers increased and presently the ulcerations did not heal for months. History of pain with the similar kind of ulcers was evident which was dull, aching, nonradiating in nature with no aggravating or relieving factors. Noted a history of bleeding while brushing. No history of any sensory loss, exfoliation of tooth, intraoral burn, or pus discharge from the affected areas. Medical history revealed that the patient was HIV positive and is under antiretroviral treatment (ART) for the last 10 years since 2009. Presently, the CD4 count for the patient was 250. History of fatty liver associated with splenomegaly since 2 years and was under treatment. Patient was married and her husband was also HIV positive patient since 2001 before marriage and was under HAART therapy. Patient had 2 sons who were not affected. No history of any smoking or smokeless tobacco. On general examination, patient was well oriented to time place and person. Temperature was afebrile, pulse 78/min, blood pressure 110/85 mmHg, and respiratory rate 15/min. Built was lean and gait was normal. On extraoral examination, no gross facial asymmetry present. Noted hyperpigmentation on the left malar region [Figure 1]. Swelling present on the lower right chin region, on inspection size 2 cm × 1 cm approximately, shape roughly oval, surface covered with crustrations, reddish in color, margins well defined. On palpation, the inspectory findings were confirmed. Consistency was soft, tenderness was present, and no bleeding or pus discharge on manipulation; similar swelling of smaller size was present 1 cm anterior to it [Figure 2]. Lips were competent and TMJ movements bilaterally were smooth and synchronous. A single right submandibular lymph node was palpable of size 1 cm × 0.5 cm approximately, shape roughly oval, firm in nature, fixed to the underlying structure, and tender on palpation. On intraoral examination, there were multiple ulcerations present with the lower anterior region and right side of jaw extending anteroposteriorly from 35 to 46 region. Consistency was soft to firm in nature; surface was covered with yellowish slough surrounded by erythematous halo. Ulcerations were seen both buccal [Figure 3] and lingual side [Figure 4] of the alveolus in the same region. Similar ulceration was seen in the maxillary jaw extending anteroposteriorly from 21 to 24 region on the lingual side, and erythema with a bluish hue with swelling was seen on the buccal side of maxillar [Figure 5]. Gingiva was normal with no bleeding on probing and no clinical pockets. With the clinical examination, the provisional diagnosis was KS affecting the maxillary and mandibular jaw.

Patient was advised to get the CD4 count and routine blood report. The report revealed CD4 count was 220 cells/mm^3, hemoglobin was 10.2 g%, and total white blood cell count was 8400/mm^3. The other blood investigations were within normal range.

Histological examination from the ulcerative area from the right side of gingiva revealed angiomatoid slit like vascular spaces containing red blood cells surrounded by spindle cells [Figure 6]. The spindle cells were arranged in fascicles and their nuclei did not show any atypical features or mitotic activity. In between tumor cells, deposition of hemosiderin pigment and infiltration by mononuclear cells were identified which were suggestive of KS.

The treatment advised was oral prophylaxis and antiretroviral therapy (lamivudine 150 mg BD, stavudine 30 mg BD and efavirenz 600 mg HS) with chemotherapy. There was no improvement in patient's condition and she died within 9 months.

Discussion

In developing countries like India, stomatognathic manifestations are used for screening of life-threatening diseases like HIV.[5] The first report of AIDS-associated KS in India was described in the

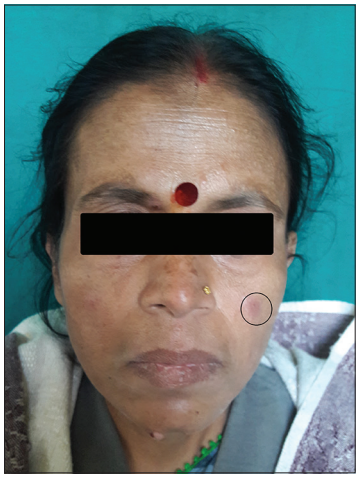

Figure 1: Hyperpigmentation on the left malar region

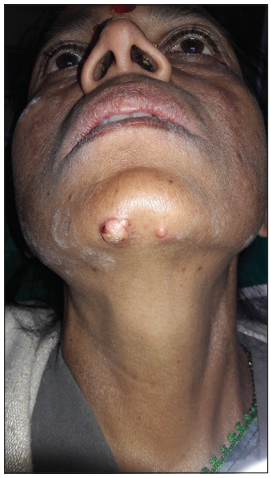

Figure 2: Two swellings present in the lower right chin region

Table 1: Review of literatures[4-8]

Reference no.	4	5	6	7	8
Year	1993	1996	2002	2004	2007
Age (years)	35	19	39	35	40
Sex	Female	Male	Male	Male	Male
Antibodies to HIV	HIV-1&2	HIV	HIV 1	HIV 1	HIV
Sites of KS	Cutaneous and mucous membrane	Cutaneous and mucous membrane	Cutaneous	Cutaneous	Cutaneous and mucous membrane
Systemic involvement	Not involved	Not involved	Lung involvement	Lung involvement	Not involved
Treatment	Vincristine, Alpha interferon, and radiotherapy	Not known	HAART	HAART	HAART
Outcome	Skin lesions improved but dies due to TB.	Not known	Died	Not known	Skin lesion resolved

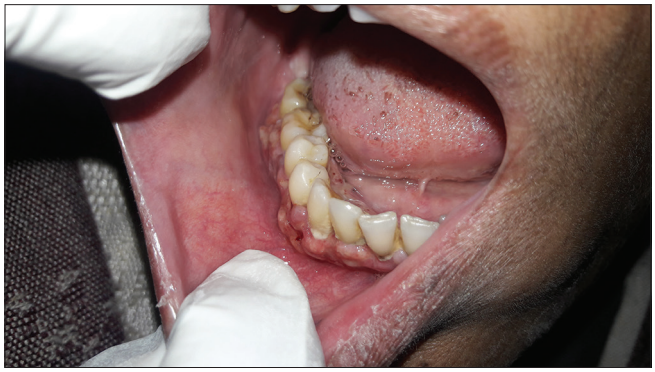

Figure 3: Ulcerations seen in the buccal vestibule

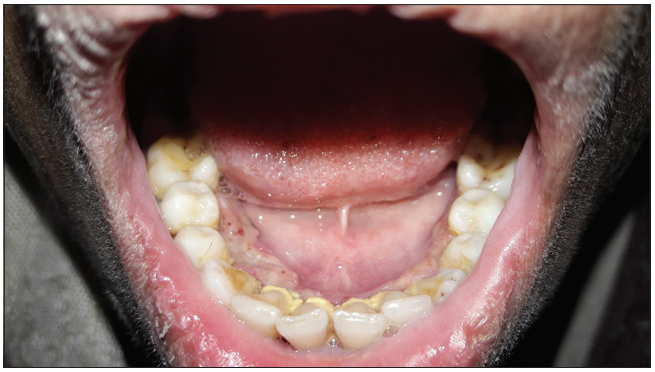

Figure 4: Ulcerations seen in the lingual vestibule

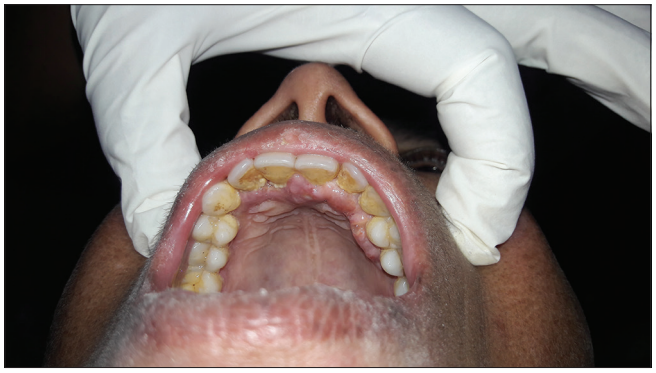

Figure 5: Similar ulcerations were seen in the maxillary jaw extending anteroposteriorly from 21 to 24 region on the lingual side

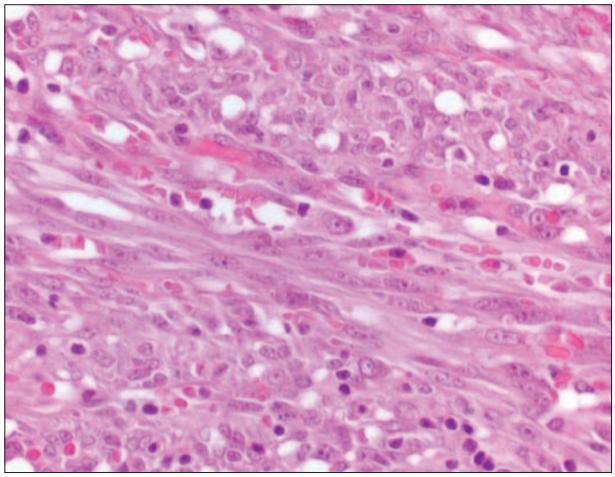

Figure 6: Histological examination shows slit like vascular spaces containing red blood cells surrounded by spindle cells

year 1993; since then very few case reports of AIDS-associated KS are described in Indian literature [Table 1].[4-8] Shroff *et al.* in 1993 reported a case of AIDS-associated KS, in which patient was treated with intralesional injection of vincrysticine and Alpha interferon (sublingually) with some regression of skin lesions.[4] Kumarasamy *et al.* in 1996 described a case of Indian drug user showing cutaneous lesions of KS, the outcome of this patient is not known.[5] In 2002, Chandan *et al.* reported a case of AIDS-associated KS in an Indian heterosexual male.[6] Krishna and Reddy reported a case of KS in a 39-year-old male. This patient was previously diagnosed case of malignant schwannoma; subsequently, on follow-up visits, he showed antibodies to HIV1 and multiple noduloulcerative lesions on limb.[7] Shenoy *et al.* described a case of KS in a patient with severe thrombocytopenia.[8] Pires *et al.* presented a case of KS where they described that presentation of KS as erythematous maculae on the dorsum of the nose with progressed to face, treated with chemotherapy associated with ART.[9] Cáceres *et al.* reported a case of 44-year-old male patient with disseminated dermatosis with high reddened converging lesions into plaques, acquiring violaceous color.[10] The low prevalence of KS in our country may be explained due to the low prevalence of HHV 8 in our population.

Conclusion

KS can be diagnosed by the dentist through oral examination, confirming the diagnosis with histopathological examination. It is mandatory for the Dental surgeon to have knowledge about the oral manifestations due to HIV positive patients. There are various treatment protocols for the treatment of KS, and it is up to the decision of the dental surgeon to decide the most appropriate therapy for each case. The association of systemic chemotherapy with local intralesional injections favors the remission of lesions being an effective therapeutic option.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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