

Case Report

Fine needle cytology of Kaposi's sarcoma in heterosexual male

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ABSTRACT

Kaposi's sarcoma is the most common malignancy associated with Human Herpesvirus-8 (HHV8) infection. Though name is sarcoma but it is low grade vascular neoplasm. It is the tumour which arises from endothelial lining of vessels as well as lymphatic channels. So it involved all sites such as skin, Gastro intestine, lungs along with lymph nodes. We are presenting one such case of 65 year immunocompromised Indian male presented with multiple non blanching reddish bluish nodules on all extremities, chest, back with submandibular and cervical lymphadenopathy. Fine needle aspiration cytology (FNAC) was performed and diagnosis was given low grade spindle cell neoplasm consistent with Kaposi's sarcoma which was confirmed on histopathology as Kaposi's sarcoma.

Keywords: FNAC, Kaposi's sarcoma, HHP virus 8

INTRODUCTION

Kaposi's sarcoma (KS) is a systemic disease which involve neoplastic cutaneous lesion with or without internal involvement. It was first described by Moritz Kaposi a Hungarian dermatologist. India has high prevalence of HIV/AIDS and associated with increase no of Kaposi's sarcoma affecting skin and mucus membranes. Even though few cases were reported on it.^{1,2} Very few publications on cytology diagnosis of Kaposi's sarcoma exist. Up to our knowledge only 5 publications were present on cytology diagnosis. We report such a case of Kaposi's sarcoma in 68 year old heterosexual immunocompromised on fine needle aspiration cytology (FNAC).

CASE REPORT

A 68 year old married male presented with multiple swelling on trunk, back, upper and lower extremities since 3 month. Lesions started on trunk and gradually spread to involve upper and lower limbs. Initially lesion were small flat and then gradually increase in size to

become nodular. He also had bilateral submandibular swelling. Patient was heterosexual and good built. No history of fever, weight loss.

On examination showed multiple erythematous papules to nodular swelling which was bluish blackish in colour on back, trunk and both extremities (Figure 1). Swelling was ranging from 0.5cm to 3cm in diameter. These all lesions were non blanchable. He also had bilateral submandibular lymphadenopathy. Systemic examination was normal. Patient was advised ELISA and he were first time come positive for HIV.

All routine laboratory investigations were performed along with CD4 counts which were low in this patient. Patient referred to cytology OPD for FNAC. FNAC were performed with 22 gauge needle from multiple sites and also from submandibular lymph nodes.

Cytology smears were hypercellular show large cohesive clumps of oval to spindle cells having oval nuclei with finely granular chromatin and indistinct cytoplasm. Few mitotic figures seen. Background shows red blood cells,

haemorrhage and macrophages (Figure 2). Cytological features are of low grade spindle cell neoplasm consistent with Kaposi's sarcoma.

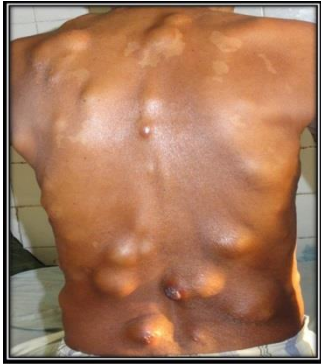


Figure 1: Shows multiple non blanching nodules all over body.

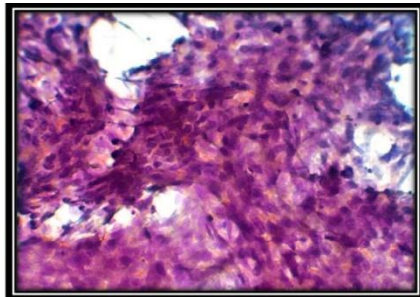


Figure 2: Hypercellular smear shows spindle cells with oval to round nuclei having fine chromatin; background shows extravasation of RBCs (PAP).

Biopsy from skin lesion was performed which shows proliferation of blood vessels arranged in slit like spaces and fascicles. These spaces filled with red blood cells with extravasation in surrounding collagen bundles. Perivascular spaces show plenty of lymphocytes, hemosiderin laden macrophages and neutrophils (Figure 3 & 4). Diagnosis was confirmed as Kaposi's sarcoma.

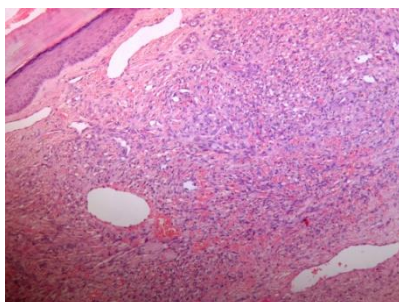


Figure 3: Shows epidermis and dermis shows proliferation of blood vessels in fascicular pattern (H&E 10x).

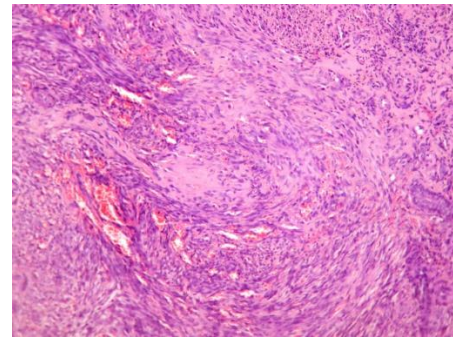


Figure 4: Shows extravasation of RBCs in surrounding collagen (H&E 100x).

DISCUSSION

Kaposi's sarcoma is an angioformative lesion common in Mediterranean and Africa. Nowadays its incidence is increasing due to its association with HIV infections. In India incidence of HIV increases but as comparative developed countries prevalence of KS is low may be due to low prevalence of HHV-8 in India.³ The first case of AIDS associated KS from India was reported in 1993 in a 35-year-old female sex worker. Since then, a very few cases had been reported amongst Indian patients. Initial reports described KS in homosexual men with AIDS, but many publications have also reported its occurrence in heterosexual males.^{4,5} In AIDS Kaposi's sarcoma has very aggressive clinical course with frequent involvement of lymph nodes, lungs and gastrointestinal tract in 50% of the patients. Lung involvement occurs in 20% of the patients and is the most life-threatening form of the disease.⁶

The causative agent of Kaposi's sarcoma is HHV-8. Its co-infection with HIV promotes the oncogenic capabilities of HHV-8; leading to the development of KS.⁷ HHV-8 infects a wide variety of cells, including lymphatic cells and vascular endothelial cells, resulting in the production of lymphangiogenic growth factors. KS has the ability to develop into lesions of varying morphologic appearance. Lymph nodes involvement associated with abnormal lymphatics observed in lymphangioma-like and lymphangiectatic Kaposi's sarcoma.⁸ Kaposi's sarcoma usually starts as a bluish red macule on the distal portions of the lower extremities and the lesions progress slowly and may coalesce to form large plaques and may progress to form firm nodular and fungiform tumours or may erode and ulcerate. Histologically there is dermal proliferation of interlacing bundles of spindle cells and intimately related, poorly defined slit-like vessels containing red blood cells. Mitotic activity is moderate and pleomorphism is usually absent. This lesion shows admixture of lymphocytes, hemosiderin laden macrophages and plasma cells.

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