

# An Unusual Case of Kaposi's Sarcoma driven by Hepatitis B Co-Infection

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## Introduction

Kaposi's Sarcoma is a vascular endothelial malignant condition caused by the human oncogenic virus HHV-8 and the most common malignancy associated with HIV-infected individuals. Although the mechanism for this is still unclear, it is thought that immunosuppression plays a role in viral replication of HHV-8 in these patients. There are four major types of Kaposi's Sarcoma described in the literature, Epidemic or HIV-associated, Endemic, Classic and Immunosuppressive. Each type presents with unique clinical presentations and courses. Disseminated KS is exceedingly rare in the context of a non-HIV infected patient.



## Presenting Complaint

A 56 year old Somalian gentleman living in Ireland since 2006 was referred to the Infectious Diseases service from Dermatology clinic with a six year history of worsening lower limb skin changes (images as shown) which he first noticed developing on the dorsal aspect of his right foot.

## Past Medical and Social History

Prior to this presentation, his medical co-morbidities included type 2 diabetes mellitus and benign prostatic hyperplasia only which were being managed by his General Practitioner. He was a non-smoker and denied alcohol use. He lived with his wife. There was no history of previous TB exposure.

## History of Presenting Complaint

Patient gave a history of attending multiple medical specialities over the years and eventually had been given a diagnosis of acanthosis nigricans of the lower limbs, given his underlying diabetes mellitus. He reported increasing hyperpigmentation of both lower limbs along with the development of nodular eruptions and associated increasing pain, requiring regular analgesia. This had accelerated over the previous two years along with hyperpigmentation developing across the palms of both his hands. He denied any systemic unwellness although his mobility was limited due to pain in his right lower limb.

## Physical Examination

Physical examination revealed velvety like nodular lesions across both lower limbs including the feet, with extensive involvement of the right lower limb and associated lymphoedema. There was associated heat and tenderness on palpation. Nodular growths on the medial aspect of the right ankle demonstrated skin breakdown with evidence of foul smelling exudate. There were no nailbed changes on exam. Full body skin examination revealed innumerable hyperpigmented nodules and macular-like lesions across the anterior and posterior thorax and upper limbs. ENT examination was unremarkable. Lower limb pulses were present and there was no evidence of peripheral neuropathy.

## Investigations:

### Baseline bloods:

Hb 12.5g/dL  
CRP and WCC -within normal limits.

### Microbiology:

Skin swabs-moderate growth staphylococcal lugdunensis and heavy growth enterobacteriaceae

### Virology:

HIV negative  
HCV negative  
VZV IgG positive  
HBV PCR158 copies/uL  
HBsAg positive  
anti-HBe positive  
anti-HBc positive  
HBeAg negative

### Skin biopsy:

Mycobacterial culture negative  
Histology- perivascular inflammatory changes  
Immunohistochemical staining- CD31, CD34 and HHV-8 positive in keeping with established KS

## Further Work Up and Investigations

CT TAP demonstrated skin and subcutaneous fat thickening over right hemi-pelvis with one solitary pulmonary nodule.

Gastroscopy subsequently demonstrated multiple dark erythematous non-ulcerating plaques in oesophagus and stomach in keeping with KS lesions.

Patient was referred on to Oncology team and commenced on monthly doxorubicin with aim to complete 6-8 cycles in total. He was also commenced on anti-viral agent Entecavir to prevent flare up of hepatitis B co-infection during therapy.

On last clinic review, patient's extensive lower limb skin changes are improving and he was requiring less regular analgesia. HBV PCR is now undetectable. He will be followed up with regular interval monitoring and has also been referred to palliative care services for symptom control.

This case demonstrates a rare yet clinically significant case of non-HIV associated disseminated Kaposi's Sarcoma and undiagnosed Hepatitis B co-infection in a non-endemic setting.

## Take Home Points:

- Highlights the need for increased awareness among healthcare providers of non-HIV associated endemic KS
- Limited literature evidence available in treating this disease entity with HBV co-infection
- Need for further research into the complex interplay between these two oncoviruses

## References:

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