

## UNUSUAL UROLOGICAL PRESENTATIONS OF HIV/AIDS AT KING EDWARD VIII HOSPITAL

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### INTRODUCTION

In South Africa all urologists are at some stage likely to be faced with management of an AIDS patient, because of the high incidence of the disease in this country. Despite thorough research, there still exists a paucity of data worldwide concerning the urological manifestations.

Our experience in the Durban academic hospitals reveals that AIDS is associated with multiple opportunistic infections, unusual malignancies, voiding dysfunction as well as metabolic disturbances.

The natural history of the disease process is frequently influenced by the patient's underlying immune status. Therefore, management of these conditions must take into consideration the patient's underlying HIV and immune status.

### STATISTICS

The joint United Nation Programme on HIV/AIDS (UNAIDS) and the World Health Organisation (WHO) has estimated that at the end of 1999 there were 33.4 million people infected with the virus. Approximately 96% of people with HIV/AIDS live in the developing world; 70% live in sub-Saharan Africa.

Local statistics,<sup>1</sup> according to the Department of Health, estimated that in 1998 there were approximately:

- 3 million HIV-positive South Africans
- it is estimated that 4.2 million people were HIV-pos-

itive in 1999, compared with about 3.6 million in 1998

- this means that more than 1 in 10 South Africans are positive
- of the women attending public health antenatal clinics, 22.4% were HIV-positive
- the highest incidence of HIV/AIDS was found to be in KwaZulu-Natal (Table I).<sup>1</sup>

According to Anthony Kinghorn and Malcom Steinberg of the HIV management services, projection indicates that by the year 2002, 250 000 South Africans will die of AIDS each year, and this figure will rise to more than 1 000 000 deaths per year by 2008. Average life expectancy will fall from 60 years to 40 years between 1998 and 2008.

The urological manifestations of AIDS can be broadly classified into four categories:<sup>2</sup>

- A. Atypical bacterial and non-bacterial infections.
- B. Unusual malignancies.
- C. Impaired renal function.
- D. Voiding dysfunction.

### A. INFECTIONS

- 15 - 20% of males with AIDS have symptomatic bacterial urinary tract infections (UTIs) (KEH – unpublished data, 1999).

TABLE I. HIV PREVALENCE RATES IN PROVINCES OF SOUTH AFRICA



- Although *Escherichia coli* is the most common organism implicated in the general population, it accounts for 25% of infections in HIV-positive patients.
- The most common bacteria is *Pseudomonas aeruginosa*, found in up to 33% of infections.<sup>2</sup>
- The prevalence of UTIs is directly related to the stage of immunosuppression as confirmed by the patient CD4 count together with their viral load.
- There is an increased incidence of bacteriuria if the CD4 count is < 200/ $\mu$ l.

#### DIAGNOSIS OF UTI IN AIDS

This is usually difficult as broad-spectrum antibiotics used to treat concurrent infections suppress culture growth.

#### TREATMENT OF UTIs

- Must be culture-specific, i.e. the correct antibiotic at the correct dose.
- Broad-spectrum antibiotics must be avoided as this rapidly leads to resistance.
- The treatment is ineffective in the setting of disseminated infection and in the presence of multiple simultaneous infections.

#### DIAGNOSIS OF OPPORTUNISTIC INFECTIONS

- A high index of suspicion must be maintained especially where symptoms persist despite negative cultures.
- Blood and body fluids must be cultured and stained using special techniques.
- Radiographical modalities such as IVP/TRUS/ultrasound/CT scan and MRI must be employed and in some cases only tissue biopsies may be conclusive (CMV cystitis/HIV-associated nephropathy (HIVAN)).<sup>3</sup>

The following collection of slides (Figs 1 - 7) serve to illustrate and substantiate what has been discussed thus far.

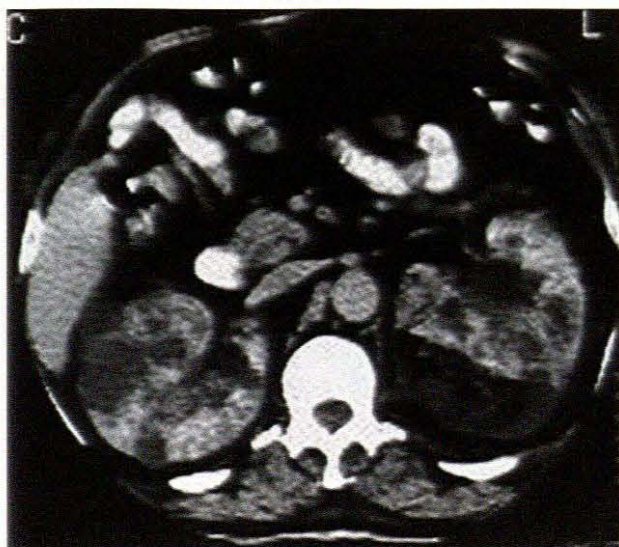


FIG. 1.  
*CT scan showing bilateral renal abscesses.*



FIG. 2.  
*CT scan of the abdomen, showing a left perinephric abscess.*

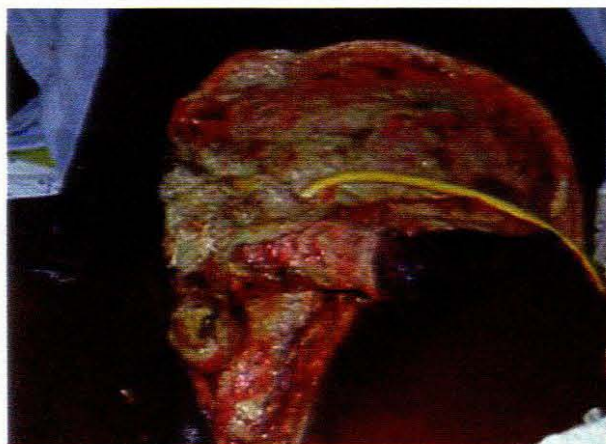


FIG. 3.  
*Extensive scrotal and lower abdominal Fournier's gangrene.*



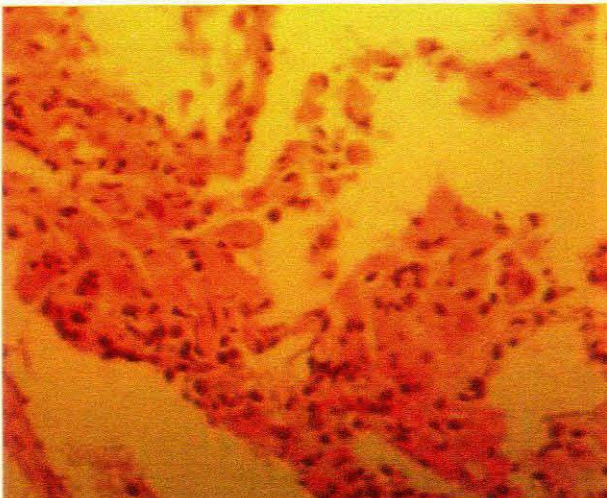
FIG. 4.  
*Diffuse scrotal abscess.*



**FIG. 5.**  
*Voiding cysto-urethrogram demonstrating urethral stricture with scrotal fistula and urethral diverticulum.*



**FIG. 6.**  
*Enlarged inguinal lymph node secondary to lymphogranuloma venereum.*



**FIG. 7.**  
*Bladder biopsy specimen with characteristic inclusion bodies of CMV infection.*

## B. UNUSUAL MALIGNANCIES ASSOCIATED WITH AIDS

As expected, unusual malignancies have been reported in AIDS patients;

### 1. Kaposi's sarcoma (KS):

- Is the most common neoplasm seen in AIDS patients. Approximately 30% of all AIDS patients will present with or subsequently develop KS during the course of their illness.<sup>4</sup>
- However, about 50% of all homosexual men with AIDS will eventually have KS.
- There is a strong association between Kaposi sarcoma and herpes virus 8, called KS associated with HV (KSAHV).
- KS involves the reticulo-endothelial system and manifests as a neovascular tumour.
- Histological examination reveals extensive spindle cells and increased vascularity infiltrated by plasma cells with extravasation of red blood cells.
- Macroscopically it presents as a purplish red papule of the skin.
- Disseminated KS involves the kidney, bladder, epididymis, prostate, vulva and penis<sup>6</sup> (Figs 8 - 12).



**FIG. 8.**  
*Kaposi's sarcoma of the left upper thigh.*



**FIG. 9.**  
*Characteristic purple-red papule of Kaposi's sarcoma of the anterior chest wall.*

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