INTRODUCTION

Carcinoma of the penis is an uncommon disease affecting less than 1% of the male adult population (1). It is possible that hygiene plays an important role in its causation (2). A majority of patients present late with advanced disease (3). We present two patients with late penile cancer who were managed in Meru District Hospital.

CASE REPORT

Case 1: HR was a seventy three year old who presented with a growth on the glans penis. He was previously well then noted a painless, progressive growth on the glans penis which was of insidious onset. After about six months, as the lesion grew larger, there was associated foul smell and a purulent discharge. He also noted bilateral inguinal swellings over the last four months, which were initially painful but were painless at the time of presentation.

He had no problem with micturition. He gave no history of haematuria or of preceding sexually transmitted infection. There was also no history of penile pruritus or any scrotal mass. He had undergone ritual circumcision when he was a teenager and thereafter had had no problem with his genitalia. His past medical history was not contributory. He was a farmer married with five children. He gave no history of a similar illness in the family. He had chewed snuff all of his adult life and took moderate amounts of alcohol.

Examination revealed an unkempt elderly man in fair general condition. He was not pale, jaundiced or cyanosed. His vital signs were within normal limits: BP 120/170 mmHg, temperature 37.3°C, pulse 80 beats/minute and respiratory rate 18 breaths/minute. Local examination showed a large fungating mass which had totally obliterated the glans penis (Figure 1).

The mass was firm, not tender and had a foul smell with purulent discharge. There were associated multiple large bilateral superficial inguinal nodes which were 2x1cm, mobile and free. The scrotum and contents were normal. The

Figure 1
Fungating penile mass
abdomen was scaphoid, moving with respiration, and had no surgical scars or therapeutic marks. There were no areas of tenderness and no palpable intra-abdominal masses. There were normal bowel sounds. Digital rectal examination revealed a normal anal sphincter tone and a moderately enlarged, smooth, firm prostate with the central groove preserved. The rectal mucosa was free over the prostate and there was no blood on the examining finger. Other findings were unremarkable.

An impression of carcinoma of the penis was made.

The following investigations were performed:
(i) Haemogram
   Hb 12.3 g/dl
   WBC 10x 10⁹/L
   Platelets 420 x 10⁹/L
   ESR 14mm/h
(ii) U/E/C
    K+ 3.9 mmol/L
    Na+  139 mmol/L
    Cl-  92 mmol/L
(iii) Urinalysis -Normal
(iv) Random blood sugar -6.2mmol/L
(v) Chest radiograph -Normal
(vi) Wedge biopsy—squamous cell carcinoma

The patient was put on parenteral antibiotics for one week to control the sepsis. He was counselled on the need for penile amputation and an informed consent was obtained. Partial penile amputation was performed under general anaesthesia. After draping, a penile tourniquet was applied. The penile skin was circumcised approximately 10 mm proximal to the tumour and all superficial vessels were identified and ligated (Figure 2).

**Figure 2**
Division of Corpora

The corpus spongiosum was identified and freed from the corpora cavernosa. The corpora cavernosa were then transected. The corpus spongiosum was then transected. The tourniquet was released and all bleeders controlled. An opening was made on the ventral aspect of the penile stump and the urethra brought out. The corpora cavernosa were closed in two layers. A Foley’s catheter was inserted into the urethra and left in situ. A tube drain was inserted and the wound was then closed with 2/0 interrupted braided polyglactin (vicryl) sutures (Figure 3).

**Figure 3**
End of operation

The patient did well post operatively and the Foley’s catheter was removed after one week. He was able to void well after removal of the catheter. The wound healed well (Figure 4).

**Figure 4**
One week post operative

At six weeks follow-up, the inguinal lymphadenopathy had completely regressed. The patient has now been followed for over 30 months postoperatively and has no recurrence (local or inguinal) and is able to void well. The patient burying the specimen precluded postoperative histopathological assessment. This was due to the practice in this hospital of entrusting specimens to patients for transmission to laboratories in Nairobi.

**Case 2:** GK, twenty five year old, presented to us with a one-year history of a swelling on the glans penis. The swelling was initially a small black
A pruritic plaque-like lesion, which progressively increased in size extending from the glans to the mid-shaft of the penis despite treatment at several dispensaries. There was no history of preceding sexually transmitted infection. He had noted dysuria in the last one month of illness and he reported that his urine stream exited from a point halfway up the shaft of the penis. GK had undergone traditional ritual circumcision at age 14 years. He gave a six year history of cigarette smoking, half a pack a day.

Examination revealed a young man in fair general condition with an exophytic, fungating, ulcerated circumferential mass on the penis extending from the glans to mid-shaft (Figure 5). The edges were rolled over and the base had necrotic slough. He also had bilateral inguinal lymphadenopathy, with firm, non-tender, mobile nodes that measured 2-4 cm in their longest diameter.

**Figure 5**  
*Penile lesion on a 25 year old male*

**Figure 6**  
*Gross pathological specimen*
An impression of cancer of the penis was made and confirmed by wedge biopsy as squamous cell carcinoma. Other preoperative investigations were normal (Hb-11.3g/dl; ELISA for HIV-negative; U/E/C-normal). Partial penectomy and bilateral inguinal lymph node dissection was carried out under general anaesthesia. The wounds healed well postoperatively. Histology showed an ulcerated infiltrating keratinising squamous cell carcinoma extending to the surgical margins (Figures 6 and 7). The lymph nodes were disease free. GK absconded from follow up on being informed of the need for further surgery.

DISCUSSION

Carcinoma of the penis is a relatively uncommon malignancy, accounting for <1% of all malignancies in men (1, 3). The peak incidence is in the 6th and 7th decades of life (4). The aetiology of cancer of the penis is unclear but certain associated conditions have been implicated, including the presence of a foreskin, chronic inflammatory conditions and exposure to human papilloma virus (5).

There is also a postulated role for poor hygienic standards in causation (6). Although circumcision in neonates is protective, circumcision after adolescence is not protective (4,7,8-10). A history of smoking and infection by human papilloma virus (HPV) are also linked to an increased risk for penile cancer (10,11). A history of phimosis has been found in 25% of penile cancer patients (12).

Metastases from penile cancers spread by way of the penile lymphatics to regional nodes, specifically the superficial and deep inguinal nodes, and subsequently the external iliac and obturator nodes within the pelvis (13). The presence of inguinal lymph node enlargement does not necessarily imply metastases but could be due to sepsis especially in situations like those that we report in which there is neglect or delay in seeking medical attention (14). However, fine-needle aspiration cytology is recommended before inguinal lymph node dissection is carried out (15, 16).

The management of carcinoma of the penis is by partial or total penectomy (16). However, less extensive surgical procedures and radiotherapy in selected cases with early disease can control it with preservation of the phallus (17). A 2cm margin has been used in partial penectomy but recent studies show that even a few millimeters of resection margin is oncologically safe (18). The late presentation of our patients is in keeping with findings of other authors that late presentation is to be expected (1). Thus, they were not candidates for phallus-preserving interventions.

The two cases presented highlight the difficulties in provision of surgical care to patients with malignancies in rural district hospitals in Kenya. There were no histopathology services in the institution and patients were given biopsy materials to submit to laboratories in Nairobi. This resulted in the loss of one specimen due to the patient's superstitious beliefs. The other problem peculiar to this setting that is clearly exposed is the difficulty of defaulter tracing. The second patient was lost to follow-up as it was not possible to trace him to his rural home because he provided unclear contact information.

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REFERENCES