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Carcinoma of penis in Zambia: associated problems in management

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SUMMARY

Thirty-three case reports of patients with carcinoma of penis were scrutinised at the University Teaching Hospital, Lusaka, Zambia to look into the associated environmental problems causing an unacceptable level of morbidity and mortality. Due to social and personal reasons, late presentation and poor follow-up is common. Improvement in the poor outcome is only possible with change in social attitudes and alleviation of ignorance. Educating traditional healers will help. For the present radiotherapy may be the other option to improve the morbidity and survival rates in this potentially a curable cancer.

INTRODUCTION

Advanced penile cancer is common in Zambia; hence this study was undertaken to look into the environmental conditions and problems associated with high morbidity and poor survival rates of this potentially curable tumour. An attempt is made to suggest ways of improving these.

METHODS AND PATIENTS

University Teaching Hospital (U.T.H) Lusaka, Zambia is the main referral centre of the country and caters for eight of its nine provinces (75 pc of the population). Thirty-three case reports of patients with carcinoma of the penis dealt over a five-year period by three consultants at the institution were scrutinised. For the period, this figure was 40 pc of all the penile cancers recorded at the Registry of the hospital.

Of the 33 patients studied, 9 were Tongas and 10 Ngonis. The youngest patient in our study was 25 years of age; the peak incidence being in the fifth decade (Table I). Table II shows conditions and problems associated with carcinoma of penis in Zambia. Twenty-one patients had a history of sexually transmitted diseases and seven had urethral strictures in the past. Seventeen patients had hygiene related problems of the penis. It is very striking that 26 out of 33 patients had gone to traditional healers before seeking medical help.

Table I: Age distribution

Age in years	21–30	31–40	41–50	51–60	61–70	71—80
Patients	2	1	7	14	6	3

Table II: Associated conditions and problems

Attended Traditional Healers	26
Sexually Transmitted Diseases	21
Phimosis	17
Chronic Balanitis	17
Urethral Problems	7
History of Trauma	8
Leucoplakia	3
Veneral Warts	2
Diabetes	1

All the 33 patients had squamous cell carcinoma histologically. Table III indicates the stage in which the patients presented to the hospital. Only four patients had the cancer limited to stage one as described by Jackson.[2] Twenty-six patients had ulcerting and seven had fungating lesions; of these seven, three had lost their penis completely. Twenty patients had clinical involvement of the inguinal nodes by metastatis; of these eight had fungating nodes. Only 12 patients could be offered definitive surgery.

Table III: Stage Presentation (Jackson)[2]

Stage 1	— Confined to Glands and/or Preduce	4
Stage 2	— Extending to shaft of penis	9
Stage 3	— Operable Malignant groin lymphnodes	16
Stage 4	— Primary tumour extending off the shaft of penis and/or inoperable groin nodes or distant metastasis	4

Table IV shows the surgical procedure carried out. Sixteen patients either refused or absconded when surgery was offered. There was no operative mortality. In Groups C and D, there were problems of wound dehiscence and delayed healing but no one required further surgery at the time.

Table IV: Surgical Procedure Carried Out

Group A	— Partial Amputation	4
Group B	— Partial Amputation + Delayed groin dissection 6	
Group C	— Partial Amputation + Block Dissection + Flap Rotation	2
Group D	— Emasculation + Block Dissection + Flap Rotation	1
Group E	— Inoperable	4
Group F	— Absconded/Refused	16

In Group A, of the four patients with partial amputation, two came back in one year with metastatic involvement of lymph nodes. The other two were lost to follow-up after one year.

In Group B, of the six patients, 2 died within one year and the rest were lost to follow-up after six months.

In Groups C, D and E, all seven patients died within six months.

Of the 16 patients who refused surgery or absconded, 14 came back within 3–6 months but were in an advanced stage of the disease. Nine of these had palliative amputation and in the remaining five, nothing could be offered.

DISCUSSION

The reported frequency of carcinoma of penis in developed countries is 2–5 pc of all urological

cancers and about 0,3–0,5 pc of all malignancies.[3] In Zambia, it is 18 pc of all urological cancers and 2,1 pc of all malignancies.[1] It is substantially lower than Kampala, Uganda (9,5 pc) and Durban, South Africa (7,0 pc).[4] It appears that tribes in the Southern and Eastern Provinces of Zambia, particularly the Tongas and the Ngonis are relatively affected more than others.

In our study, a very high proportion of patients suffered from sexually transmitted diseases and many have hygiene related problems of the penis; circumcision being generally not practised except for a few tribes in the North-Western Province. Phimosis with or without balanitis bears a direct aetiological relationship to penile cancer and conditions like leucoplakia and Keratosis have been frequently cited as precancerous.[3] In our environment, human papilloma virus may be one of the factors responsible for the causation of the disease. Nine percent of our patients had carcinoma complicating Leuoplakia. What part trauma plays in causation of the cancer is debatable. Of the 169 patients studied by Hanash et al,[3] 20 had trauma to the penis; eight of our patients had history of severe trauma. We feel that trauma as an aetiological factor cannot be ignored. The peak incidence in our study and that reported by Davey[4] in other African countries is in the fifth decade as opposed to the one reported from the Mayo Clinic[3] where it is in the sixth decade. This may be due to younger population being at risk. In Zambia, 45 pc of the population is below the age of 15 years.

Prognosis is related to the grade of tumour, recurrence rates and extension of the tumour; over all survival rates are dependant on early detection and immediate definitive treatment. The prognosis for early cancer has improved from 60 pc to 90 pc in last decade or so.[5] Nelson[10] reports 70 pc five-year survival for all stages. In Zambian Society, excision of penis is synonymous to feminisation and loss of phalus will lower the status of the man in the family and at his place of work. Zambian people also do not like to discuss their genital problems. In our situation, the problem in managing the cancer is late presentation (Figures I and II) and poor follow-up compliance resulting in high morbidity and poor survival rates. Because of the social structure, vast majority of the patients go to the traditional healers. In Zambia, traditional healers are performing crucial social and medical functions and are patronised mainly by people who are faced with social and psychological crisis.[11] In a developing country like Zambia where medical facilities are not readily available, they are the first line of contact and their clients are shrouded in secretary. Refusal to undergo surgical amputation or absconding when offered surgery will continue till such times as there is a change in social attitudes and health facilities are easily available. Public Health Workers can play a major role in this respect. Educational efforts directed towards the traditional healers in making them aware of the condition and consequences of delay may permit early patient referral to the hospital; hence better morbidity and survival rates.

Figure I: Advanced penile cancer.

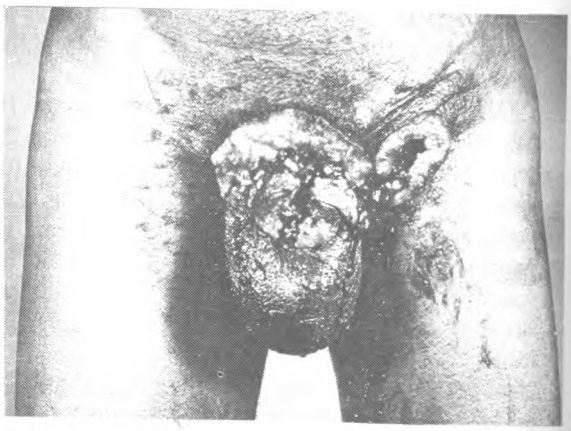

Figure II: Advanced penile cancer.

Hanash *et al*[3] suggest that radiotherapy be used in patients who refuse any surgical form of treatment. Hope-Stone[6] recommends radiotherapy only for early cancer of the penis since the results are as good. Cosmetically and psychologically, there is every thing to gain; not only the patient continues to micturate in a normal way but in young patient normal sexual intercourse can always be achieved.

Another advantage of irradiation is the possibility of salvage surgery for recurrence. Pointon[7] reported crude survival rate of 78 pc at three years and 79 pc at five years by treating the cancer confined to prepuce and glands with megavoltage X-ray therapy. He found external beam therapy a superior method in controlling primary tumour with acceptable degree of morbidity. Murrel and William[8] prefer radiotherapy as treatment of choice for inguinal nodes involvement. They urge that morbidity associated with block dissection of the groin could in part be prevented by radiotherapy. Blandy[9] suggests that in advanced cancer palliative ratiodiotherapy might prevent fungation of inguinal nodes and overcome pain.

Our study clearly shows that due to social and personal reasons, surgical management of carcinoma of penis in our environment is totally ineffective and morbidity and survival rates are dismal. This will change with change in social attitudes and alleviation of ignorance but meanwhile an alternative mode of therapy must be found. We recommend that installation of a radiotherapy unit in the country may be a short term answer to improving the morbidity and mortality in this potentially a curable cancer.

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