BLADDER TUMOURS – A REVIEW OF 150 PATIENTS TREATED AT THE INSTITUTE OF UROLOGY AND NEPHROLOGY GENERAL HOSPITAL KUALA LUMPUR

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SUMMARY

One hundred and fifty patients with urothelial tumours were reviewed. They form the majority of patients with bladder cancer referred to the Institute of Urology over the past three years. From the study it becomes very apparent that the majority of patients are seen late in the course of their disease. The results of treatment of patients with early lesions have been satisfactory but the patients with late invasive lesions have very poor prognosis. A plea is made that one be more aware of this condition and that symptoms of haematuria and urinary tract infections should have a full urological assessment early.

INTRODUCTION

The management of urothelial tumours forms a substantial part of the work of a Urology Department. It had been estimated that in the United States of America alone 9400 patients would die of bladder cancer in 1980 and 28,700 new cases will be diagnosed each subsequent year. [1] From our experience at the Institute of Urology bladder tumours comprise the majority of urinary tract tumours and the average incidence being about three new cases per month over the last few years.

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MATERIALS AND METHODS

This study includes 150 patients with histologically proven neoplastic change of the urothelium. None of the patients had primary neoplasms elsewhere. The study was made with particular reference to age, sex, and ethnic group, and details of individual symptoms.

RESULTS AND DISCUSSION

One hundred and fifty patients were referred to the Institute. Majority of these patients were those seen over the period 1978 to 1981. Eighty-six percent of patients were resident in the more populous states of West Malaysia. This is shown in Fig. 1.

Age

The patients ages ranged from 25 to 87 years. This is shown in the block graph of Fig. 2. There is a high incidence in the 70-79 years age group.

Ethnic Groups

The majority of the patients (60 percent) were of Chinese descent, 27.4 percent were of Malay descent (Table I).

Symptoms

Haematuria was the most common single symptom present in 80 percent of patients. The

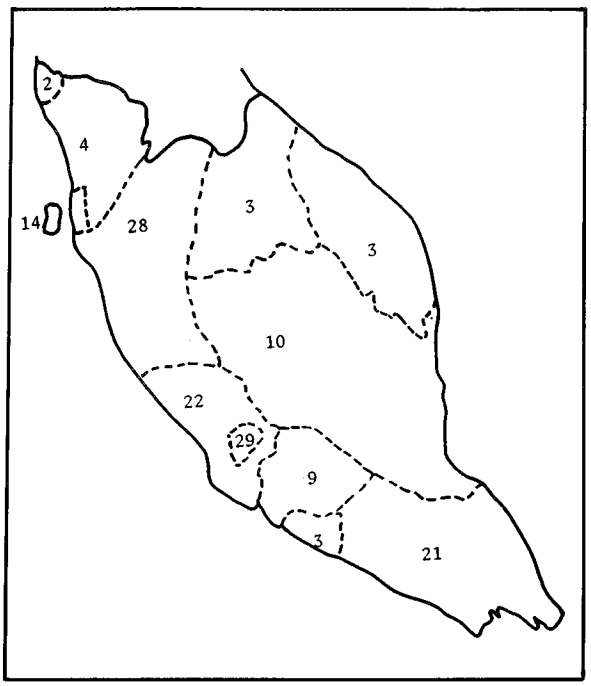

Fig. 1 Geographic distribution of patients referrals.

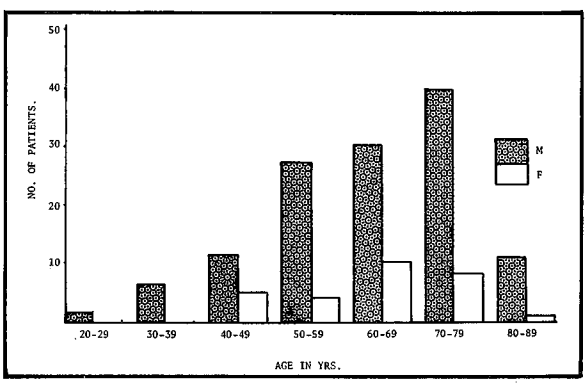

Fig. 2 Age distribution of Urothelial tumours.

time of onset of the symptom to diagnosis varied considerably. This is shown in Table II. Lower urinary tract infection was the next common symptom. 0.6 percent of patients had uraemia secondary to a large mass producing obstruction at the ureterovesical junction or at the bladder neck. Weight loss and suprapubic discomfort were the other presentations.

Stage at Initial Diagnosis

Endoscopic and palpable findings together with the depth of invasion were used as guidelines to assess the clinical stage in each case according to the

TABLE I
ETHNIC AND SEX INCIDENCE OF UROTHELIAL TUMOURS IN 150 PATIENTS

Ethnic Group	Male	Female	Total	Percentage
Malay	36	5	41	27.8
Chinese	75	17	92	60.9
Indian	14	2	16	10.5
Others	1	-	1	00.6

TABLE II
SIGNS AND SYMPTOMS OF PRESENTATION AT THE INSTITUTE

S-S	% Of Patient	Period Of Complaint	Mean
Haematuria	80	20d - 7 yrs	8m
Lower Urinary Tract Infection	18.6	2m - 3 yrs	5m
Features of Malignancy	5.3	1m	-
Chronic Renal Failure	0.6	1m	-
Acute Retention	2	-	-
Suprapubic Mass	1.3	3m	-

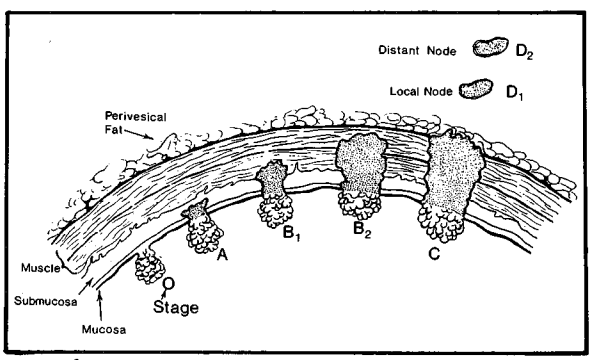

Fig. 3 [2] Stage and grade of tumors. Depicts relationship between depth of infiltration and grade of malignancy described by Marshall's modification of Jewett's original classification of relationship of grade to stage. (Marshall VF: J Urol 68:714—723, © 1972 The Williams & Wilkins Co., Baltimore) Fig. 24-1.

Marshall's modification of Jewette and Strong classification. [2] This is represented in Fig. 3. The percentage of patients in each stage as assessed at the initial cystoscopy is depicted in Fig. 4. The majority of our patients were noted to be in stage C of the disease.

Findings at Cystoscopy

Single lesions were found only in 88 patients. Most common location of single tumours was on the

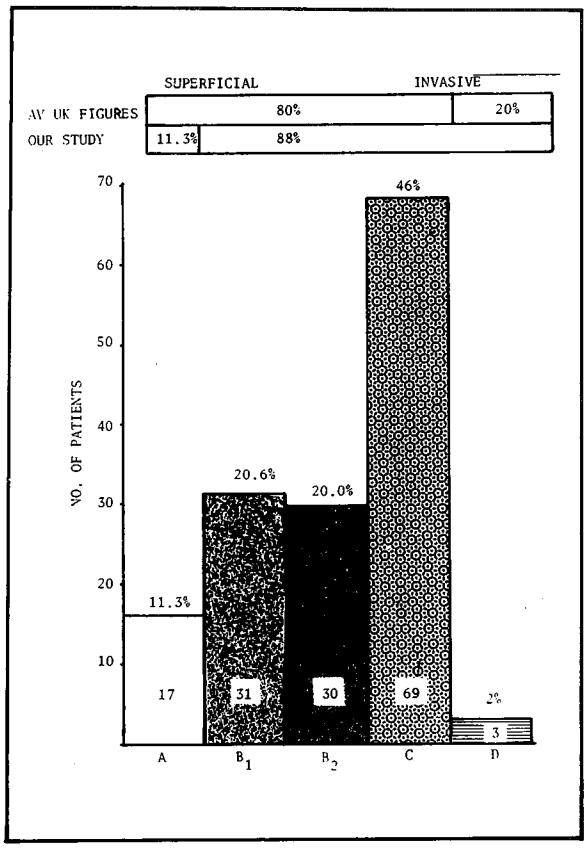

Fig. 4 Graphic representation of stage at first presentation to the Institute of Urology.

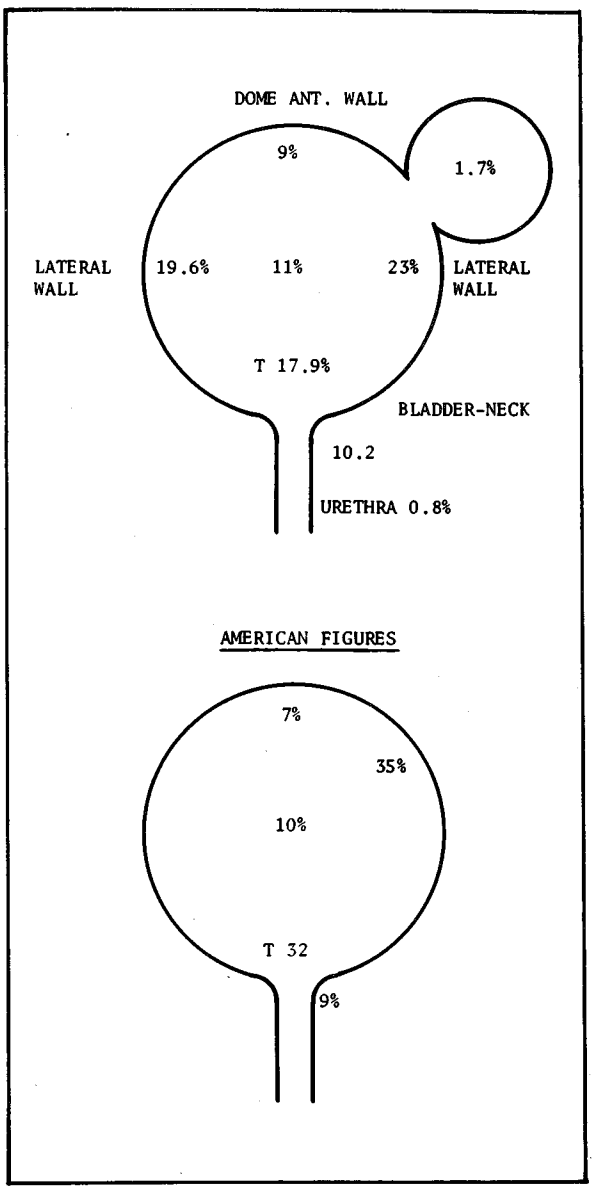

Fig. 5 Sites of tumours seen.

lateral walls of the bladder. This is shown in Fig. 5. Multiple lesions were documented in 30 patients. In 74.2 percent of patients the tumour was noted to be greater than 5cms at its base or involved almost the entire bladder surface as seen at cystoscopy. The most common morphological appearance was a papillary pedunculated tumour.

Histology

Majority of patients had transitional cell carcinoma. Squamous metaplasia was noted in a patient and adenocarcinoma was noted in 2. Unfortunately there was no indication as to the histological grading in most pathological reports received.

TREATMENT AND RESULTS

Patients with stage A tumours (superficial) were subjected to transurethral resection. They were subsequently followed up with cystoscopies every 3 months. The period between cystoscopies was increased when it was evident that the mucosa was stable. Follow up is life long. Early invasive tumours designated as B, were resected and managed as above. When the tumour was noted to invade the muscle deeply (Stage B2) the patient would be subjected to low dose ($\leq$ 4000 RADS) Deep x-ray therapy and a total cystectomy with urinary diversion would be performed for consenting patients. Alternatively those refusing surgery would be advised transurethral resection followed by deep x-ray therapy. Tumours in stage C

TABLE III
TREATMENT OF LOCALLY INVASIVE TUMOURS (STAGE B2, C)

No.	Treatment	Response	Percentage	Follow Up	Comment
45	TUR & DXT	16	32	12m	
30	TUR Defaulted after initial DXT	-	-	-	Side Effects
4	Partial Cystectomy and TUR	4	100	24m-30m	Tumour free
5	Preoperative DXT Foll total Cystectomy	4	100	3m-7m	1 Awaiting operation

or D were referred for palliative deep x-ray therapy. Intravesical chemotherapy (Adriamycin 50 mg monthly for four months) would be considered should there be multiple superficial tumours or multiple superficial recurrences in the hope of controlling the disease. The above modalities outline the present policy of the institute in the management of bladder tumours.

Superficial Tumours

Sixty-six patients when assessed initially were considered to have superficial tumours. They were treated by transurethral resection and coagulation of the tumour base. It was possible to recognise a response in 55 patients or 84.6 percent of patients so treated. Five of the patients were noted to develop multiple recurrences. They were put on intravesical chemotherapy with adriamycin. Initially the mucosa seemed responsive in four patients but with continued follow up it is becoming apparent that the stability of bladder mucosa is not permanent. One young patient aged 24 years however has had a visible response to the chemotherapeutic agent Epodyl he received while in London. He is tumour free after a period of four years. Four patients were referred for radiotherapy when it was found that the tumour had recurred extensively. These 4 patients have shown to exhibit stable urothelium over a period of follow up varying from 20 months to 36 months. One other patient developed paraplegia but showed a stable urothelium on cystoscopy. Three patients died of unrelated causes.

Invasive Tumours

In Table III, fifty patients received radiotherapy following partial resection of the tumour. In only 16 patients (32 percent) were we able to document a response over a mean follow up period of 12 months. Of the 34 (68 percent) in whom the tumour was not irradicated, 10 showed significant downstaging of tumour enough for us to suggest salvage cystectomy. They refused operation. Of the 34, five patients had invasive but surgically resectable tumours. Four of them were referred for low dose radiotherapy ($\leqslant$ 4000 RADS) and followed by immediate total cystectomy and urinary diversion. One is awaiting operation. Though the follow up of these patients has been short (7 months) the patients are well and have adjusted well to their ileostomy. Four patients developed extensive metastases and were discharged while 15 of the patients have been lost to follow up. Four separate patients have been on our follow up after partial cystectomy for resectable deep lesions. They are tumour free on follow up periods ranging from 24 months to 30 months.

DISCUSSION

Urothelial tumours can be considered as a chronic neoplastic diathesis. There is a high recurrence rate observed in patients with superficial or low stage bladder cancer. It is interesting to note that 80 percent of our patients had involvement of muscle or perivesical tissue on first presentation. This is in sharp contrast to figures elsewhere in Europe where two thirds of the patients have superficial papillary tumour when first seen. It is obvious many of our patients have had the disease for quite a while and that they were detected late. Even though the follow up period for our series is short and no conclusion as to the success of our management could be drawn, this series forms the first documented group of patients with bladder cancer in this country. All persons involved in the management of bladder neoplasms need to be alert for cases where the disease is occupational. We have not been able to relate the development of urothelial cancer in this series to any industrial occupation in particular. In the United Kingdom primary neoplasms of the urothelium have been recognised as a prescribed industrial disease.[3] Carcinogens have been identified in many

industries and most cases of occupational bladder cancer have occurred following work in the manufacturing of dye stuffs, and in the rubber and electric cable industry. Contact to carcinogens can be as brief as a few weeks. Persons working in laboratories and in textile manufacture also run similar risk. All these persons would need a life-long follow up to detect development of urothelial change. Perhaps it would be prudent at this stage of development of Malaysian industries that the clinicians work in conjuction with the Industrial Disease Physician to identify the possible industries concerned and determine the population at risk, as it is envisaged that there would be a dramatic increase of incidence of bladder tumours in the next decade or two. Edoscopic cystodiathermy or resection remains the initial treatment for superficial tumours. Much has been written about the benefits of intravesical chemotherapy in conjunction with the above especially in frequently recurring superficial tumours. Our experience with adriamycin however has not been too encouraging but this is a small series. Radiotherapy has been the last resort for extensive invasive disease though it is difficult to comment as to its efficacy. Perhaps with accurate histological grading of tumours in the future we would be able to predict the course of the disease with more confidence and resort to radical surgery early in the course of the disease. It has however been our experience that only a few patients agree to total cystectomy and urinary diversion and hence at least for the time being early detection of bladder tumours should be our goal. It is very discouraging to note that as much as 45 patients have been lost to follow up. Thirty of these patients could not apparently stand the effects of radiotherapy and refused further treatment. It should be understood that the majority of our patients are from outstation towns and of low income group. To overcome much of these problems we have instituted a tumour registry at the Institute where all the particulars of the patients are kept. By reviewing this registry frequently it is possible to call back those patients who have defaulted follow up. It is hoped that by this means of communication we could obtain better results in the future. In conclusion it is emphasized that haematuria and cystitis like symptoms need early cystoscopy. As far as early detection of bladder tumours is concerned check cystoscopy and biopsy remain the most reliable investigation at the present time.

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