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The Pattern of Urinary Bladder Carcinoma in Suez Canal Area : A Retrospective Study

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Abstract

Between 1985 and 1992, 141 cases of bladder carcinoma were diagnosed in the Departments of Urology and Pathology, Faculty of Medicine, Suez Canal University. A review of this group was carried out to identify their clinicopathological features. The male to female ratio was 3.3:1 and the overall mean age was 54.75 years. 85% of bladder carcinoma occurred between the age 40 and 79 years. Transitional cell carcinoma occurred in 75 cases (53.2%) and squamous cell carcinoma in 55 cases (39%). Schistosomiasis still more frequently exists with the squamous (56%) than with the transitional type (30.6%). The findings report observations on the pattern of urinary bladder carcinoma in the area and relate it to the literature.

Introduction

BLADDER cancer has been increasingly associated with urinary schistosomiasis and the potential risk for developing cancer bladder in hematobium infected patients is high [1]. Urinary bladder carcinoma represents about 30.8% of male malignancies in Egypt [2]. Abnormal tryptophan metabolism in patients with urinary schistosomiasis has been proved, yet a purely mechanical irritation by ova was also proposed [3].

The type of bladder carcinoma that is linked to schistosomiasis is the squamous type, constituting approximately 60% of bladder carcinomas in Egypt [4]. Recently

this proportion has been decreasing for a corresponding rise in that of the transitional type [5].

Many new cases of bladder carcinoma occur in non bilharzial patients while many bilharzial patients suffer from the "non traditional" squamous cell type. The purpose of the present study is to describe the pattern and features of bladder carcinoma in Suez Canal Area, setting up a cancer data base for further interregional comparison.

Material and Methods

Material of the present work has been obtained from the files of Urology and Pathology Departments, Faculty of Medicine, Suez Canal University over 8 years period (1985 through 1992). Paraffin blocks were cut, routinely stained and examined. Patients data and diagnoses were checked. Data were organized into spread sheet and analyzed.

Results

Epidemiologic data:

141 detected bladder carcinomas from Suez Canal Area were examined. Their distribution over diagnosis period is shown in Fig. (1). Their corresponding data showed that their age profile ranges between 20 and 80 years with an overall mean of 54.75 (SD ± 12.03) years. Male to female ratio was 3.3:1. The age and sex distribution of the studied group is shown in Fig (2). Twenty six percent of patients

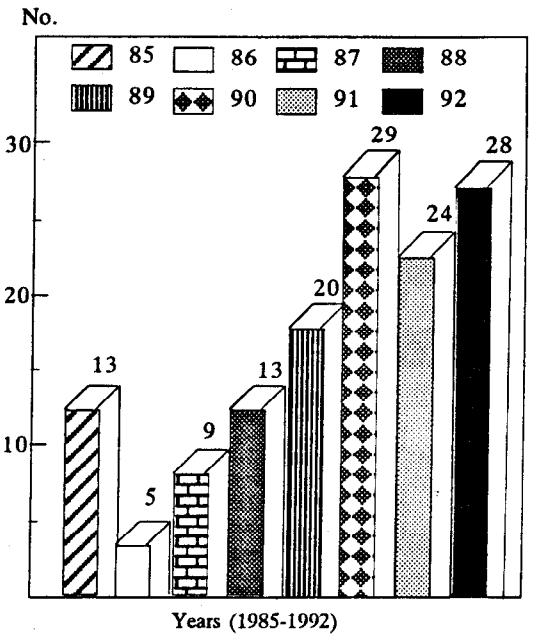

Fig. 1: Frequency of urinary bladder carcinoma years (1985-1992) in Suez Canal area.

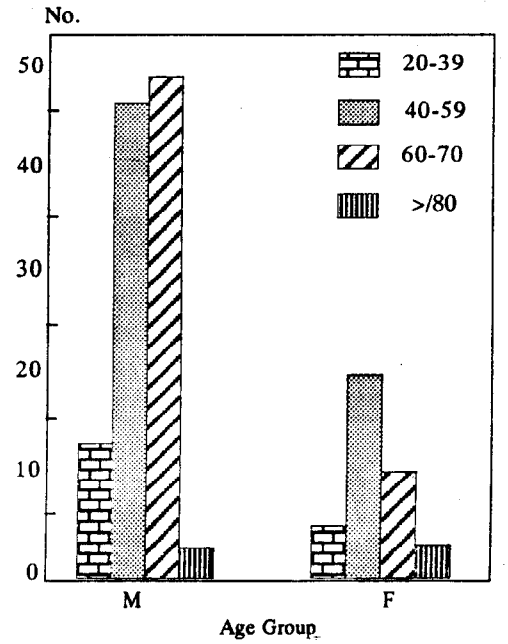

Fig. 2: Age and sex in 141 bladder carcinomas in Suez Canal area.

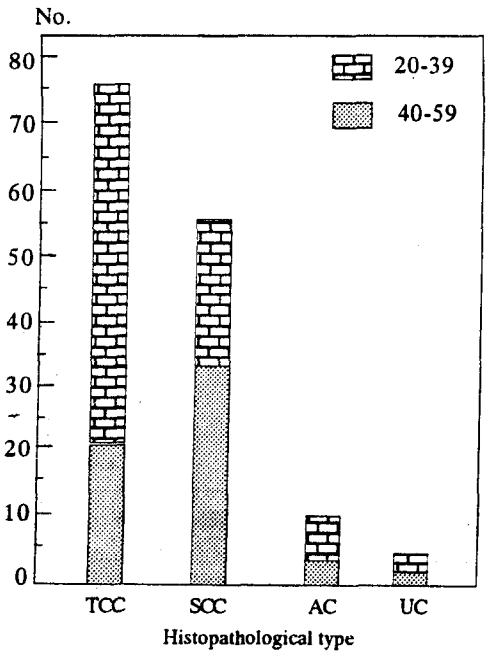

Fig. 3: Prevalence of Bilharziasis in different types of bladder carcinoma (141- specimens) in Suez Canal area.

were farmers. Positive history of bilharziasis was given in 33%. The commonest presenting symptom was hematuria (42.5%), table 1.

Pathological findings:

Data on the macroscopic appearance of the tumors were extracted from the available endoscopic and the naked eye description as shown in table 2.

Microscopically transitional cell carcinoma predominated (Fig. 3). The sex distribution of the histologic types is shown in table 3 and the distribution by age groups is shown in table 4.

Table (1): Frequency of the Presenting Complaints

Comolaints	Frequency	%
Hematuria	60	42.6
Dysuria	29	20.6
Frequency	26	18.4
Necroturia	26	18.4
Total	141	100.0

Table (2): Macroscopic Appearance of 118 Bladder Carciomas.

Appearance	Frequency	%
Nodular	29	24.6
Villous	29	24.6
Fungating	39	33.1
Ulcerative	13	11.0
Other	8	6.7
Total	118	100.0

Table (3): Distribution of Types of Bladder Carcinoma by Sex

Carcinoma	M	F	Total
TCC villous	21	5	26
TCC invasive	37	12	49
Squamous CC	43	12	55
Adenocarcin.	5	3	8
Undiffer. C.	2	1	3
Total	108	33	141

Table (4): Distribution of Bladder Carcinoma by Age Group.

Age Group	TCC		SC	AD	UD	Total
	TP	TI				
20 - 39	1	5	10	1	1	18
40 - 59	12	20	28	2	0	62
60 - 79	13	23	16	5	2	59
> / 80	0	1	1	0	0	2
Total	26	49	55	8	3	141

Table (5): Pathological Staging of 141 Bladder Carcinoma .

Stage	TCC		SC	AD	UD	Total
	TP	TI				
Superficial:						
Epithelial	13	1	7	0	0	21
Lamina propria	7	8	10	2	0	27
Muscle, superf.	4	12	11	3	1	31
Deep:						
Muscle, deep	1	17	16	3	2	39
Perivesical	1	9	10	0	0	20
Distant	0	2	1	0	0	3
Total	26	49	55	8	3	141

$p > 0.393$ (NS)

Pathological staging of the tumors as judged by tumor extension is shown in table 5, where superficial tumors constituted 60% and 50.9% of the transitional and the squamous carcinomas respectively.

Bilharziasis was histologically documented in 59 instances of the total (41.8%); in 60% of the squamous and 28% of the transitional types (Fig. 3)

Discussion

The clinico-pathological features of bladder carcinoma vary in different regions. In Egypt, the relative frequency of bladder carcinoma in different reports ranges from 11.3 to 27% out of all tumors [6,7,8].

It had been found that the majority of these tumors belong to the squamous cell type (75%), yet transitional cell carcinoma also constituted a considerable number of cases (20%) [9]. The causal relationship between bilharziasis and bladder malignancy is probably attributed to an enhanced proliferative activity promoted by the irritation [10] yet other environmental factors have been also incriminated [4,11,12,13].

In the present study the majority of cases (85.9%) were in the age group 40 to 79 years. The overall mean age was 54.8 ± years which is higher than older reports [14] but matches with recent observations [5] and can be interpreted by the rising average life expectancy and to a lesser extent by regional differences.

Male to female ratio was 3.1 to 1 compared to 4:1 ratio of El-Bolkainy and others [14] and 5:1 ratio of Koraitum and colleagues [5] and contrasting with 11.8:1 ratio of Makhyoun [11]. This reflects vast difference in reporting sex exposure to the disease.

Recently a relative increase in the transitional cell type was reported [5,15]. In the current study this was 53.2% compared to 39% squamous type.

Superficial and deep neoplasms constituted 56% and 44% of the study cases respectively. No significant difference was found between superficial and deep neoplasms in the transitional and squamous types.

Schistosomal affection as evidenced by ova detection in or around the growth was found in 30.6% of transitional cell carcinoma compared to 60% in the squamous type, a finding that reflects a growing tendency to develop non traditional types of carcinoma with bilharzial affection [16]. In a Sudanese report of 52 squamous cell carcinomas, stigmata of schistosomiasis were found in 69% of cases [17].

The limitation in identifying other possible pathogenetic factors in the present work are the result of a case study retrospective nature of the work. Nevertheless, the findings denote higher percentage of transitional cell carcinoma exceeding that of squamous type, both for the bilharzial patients. This study is an initial report

from the area and further inter-regional comparative studies are anticipated.

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