Epidemiology of Genito-Urinary Tumors in Qatar

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Abstract:
A retrospective review of genito-urinary tumors examined histopathologically in Qatar during the period 1998-2004 showed bladder cancer to be the most common followed by prostate, renal, testicular, renal pelvis and urethral tumours in order of decreasing prevalence. The apparent increasing annual prevalence of some tumors is discussed and the findings are compared with those reported from neighbouring countries and in literature from the West.

Keywords: Genito-urinary Tumors, Epidemiology, Qatar

Introduction:
Although genito-urinary tumors are not very common in the Gulf States compared to others (1,2), no effort has been made to assess the epidemiology of such tumors in Qatar. In this article a retrospective study of tumors affecting the kidneys, ureters, bladder, prostate and testes covers the six years 1998 to 2004.

Patients and Methods:
All reported and histopathologically documented cases of genito-urinary tumors (GUT) in the period January 1998 to August 2004 were divided according to the site of the tumor and each was then further subdivided according to age and sex. The annual incidence was also recorded.

Results:
Of the total 293 genito-urinary tumors, bladder cancer was the most common (125; 43%) followed by prostate (73; 25%), renal (58; 20%), testicular (27; 9%), renal pelvis (7; 2%), and ureter (3; 1%).

A. Bladder Tumors (Figure 1):
The highest incidence was in the 50-69 years age group and a much higher incidence in males than in females was seen with 115 males and only 10 females.

Of the 125 cancers of the bladder, 122 were transitional cell carcinomas (TCC). Only 10 cases were T2, the rest were Ta, T1 and carcinoma in situ (CIS). Five of the 10 cases underwent radical cystectomy while the superficial disease was managed by endoscopic resection and adjuvant chemotherapy.
B. Prostate Tumors:

There were 73 prostate tumours with a steadily increasing annual incidence (Figure 2). The highest age incidence (nearly 40%) being in the 50-59 year group. Twenty-nine of the tumors were confined to the organ and 13 of these had radical retropubic prostatectomy (RRP). In 11 cases a higher stage of the disease was found post-operatively.

C. Renal Tumors:

Apart from three cases of nephroblastomas in the 0-20 year age group all the renal cell tumors were carcinomas. These also showed a steady rise in annual incidence with the highest prevalence being in the 40-49 year age group (Figure 3). Males were almost five times more affected than females (48 males and 10 females). Transitional cell carcinoma of the upper tract occurred in the renal pelvis in seven cases and in the ureter in three cases.

D. Testicular Tumors:

Eighteen of 27 testicular tumors were seminomas. The age distribution showed equal prevalence in the age groups 20-29, 30-39, 40-49 years (Figure 4).

Discussion:

Bladder tumors in Qatar remain the most common of genito-urinary tumors, similarly in adjacent countries(1), but different from western studies showing prostatic cancer to be the leading GU tumour(3). Moreover our highest incidence was in the 50-59 year group while it is usually reported to be 80% after that age(4). The male to female ratio globally is 2.5:1(5) which is quite different from our findings (115:1). This could perhaps be explained by the large unaccompanied male expatriate working population that tends to skew the demography of Qatar. Other Middle-Eastern countries show figures between ours and those of the West(6).

Prostate cancer is the most commonly diagnosed cancer in USA, second only to skin and lung cancer as a killer(4); in Qatar, and in the surrounding region, it is less common but the annual incidence is seemingly rising as elsewhere(4,7). The way of life has been blamed for the increasing incidence of prostate cancer in the west(8,9), so the increasing westernisation in our culture and country might explain our rapidly increasing incidence as also might the increasing male expatriate workforce. The higher stage found in most of those who underwent RRP is similar to other series(10,11).
Renal parenchymal tumors comprised 20% of all GU tumors, with a steadily rising annual incidence. Similar reports have found that this increase is not due solely to better and earlier detection\(^\text{[12]}\). The sex ratio is also different and although reported as a disease of the 50-69 year age group\(^\text{[13]}\), our series showed the highest peak in the 40-49 year group.

The urothelial upper tract tumors were too few to draw any conclusion but their incidence is very low in accordance with other literature\(^4\).

The incidence of seminoma and non-seminomatous germ cell tumors (NSGCT) is reported generally to be equal\(^\text{[14]}\) unlike our series in which seminomas were twice as many as NSGCTs. The incidence of testicular tumors was even and equal over the 20-49 year age groups in contrast to many reports in the literature where these tumors are much less common after 40 years of age\(^\text{[4,15]}\).

**Conclusion:**

1. Bladder tumors are the most common GU tumors in Qatar.
2. Late diagnosis of prostate cancer is still common, thus hindering cure.
3. Later age of presentation in testicular masses should still give rise to suspicions of malignancy.

**References:**