

A Young Female Patient Diagnosed to Have Urinary Bladder Urothelial Carcinoma: A Case Report

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ABSTRACT

Bladder cancer can occur at any age-even in children. However, it is generally a disease of middle-aged and elderly people, with the median ages at diagnosis for urothelial carcinoma being 69 years in males and 71 years in females. We report a case of transitional cell carcinoma of the bladder in a 24 years old female.

Key words: Urinary bladder, Transitional cell carcinoma, Young adult

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Introduction

The incidence of bladder cancer increases directly with age from roughly 142 per 100,000 men and 33 per 100,000 women age 65 to 69 years to 296 per 100,000 men and 74 per 100,000 women 85 years or older. In adolescents and in adults younger than 30 to 40 years, bladder cancers tend to express well-differentiated histologies and behave in a more indolent fashion.

Previously we had reported a case of bladder transitional cell carcinoma (TCC) in a young male aged 27 years,⁽¹⁾ and now we have encountered a younger case which deserves to be reported.

Bladder cancers are malignant tumors that begin in the bladder. Different bladder cancers are described by how deep they grow and if they grow into the bladder or through the muscles around the bladder (superficial or invasive).

There are three types of bladder cancer: transitional cell carcinoma, or TCC (about 90% of bladder cancer cases), squamous cell carcinomas (about 8%) and adenocarcinomas (about 2%). There are other less common types

of cancers that arise in the bladder, including sarcomas (which begin in the muscle layers of the bladder) and small cell anaplastic cancers (a rare type very likely to spread to other parts of the body). All three types can metastasize beyond the bladder. The tumor can grow into the surrounding organs (uterus and vagina in women; prostate in men), called locally advanced disease. It can also spread to the nearby lymph nodes, and/or into the liver, bones, or lungs; this is called distant metastasis. In some cases, it can spread to other parts of the body.⁽²⁾

The *incidence* rate of a cancer is defined as the number of new cases diagnosed per 100,000 persons per year. It was estimated that in 2005, 63,210 new cases of bladder cancer were diagnosed in the United States. Bladder cancer is nearly three times more common in men than in women. In men, it is the 4th most common cancer after prostate, lung, and colorectal cancers, accounting for 6.6% of all cancer cases. In women, it is the 9th most common cancer, accounting for 2.4% of all cancers. Between 1985 and 2005, the number of bladder cancers diagnosed annually in the United States increased

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Fig.1: Fungating mass as seen cystoscopically

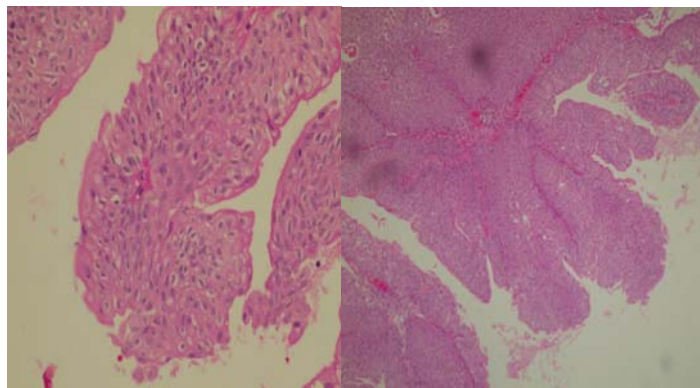


Fig. 2: High magnification and low magnifications show TCC without muscle invasion.

by over 50%, at a 25% faster rate in men than in women.

Bladder cancer is nearly three times more common in men in the United States than in women, but women have more than a 30% higher chance of dying of bladder cancer, if they develop it, than men do. Bladder cancer occurs roughly half as often in African Americans as in whites but is nearly twice as likely to be lethal in African Americans as in whites. In Hispanic Americans, bladder cancer also occurs about half as often as in whites but Hispanics are less likely to die of bladder cancer, if they develop it, than whites are.⁽³⁾

TCC is the predominant cancer, with significant male preponderance among patients. Younger-aged patients have low-grade disease. Hematuria is the most common presentation (see Table I).⁽⁴⁾

Case Report

Our patient is a 24 year old female, who smokes one pack per day for the last three three years. Married, G1P1, not known previously to have any chronic medical illnesses presented to our urology clinic at Jordan University Hospital (JUH). Claims that while she was pregnant, 18 months ago, her obstetrician informed her at that time she had fungating urinary bladder mass as

showed by ultrasound. She ignored and neglected this finding at that time. She denies any urinary symptoms during this interval period. She was admitted to JUH for evaluation and management.

Her physical exam was unremarkable, laboratory results were Hb 13.2, PCV 40, urea 24, creatinine 0.52. Urinalysis showed yellow color, no pyuria, no hematuria. Ultrasound for abdomen and pelvis showed echogenic lobulated mass lesion seen attached to right posterolateral urinary bladder wall measured 2.5*1.5cm. Cystoscopy findings (Fig. 1).

A fungating mass was located in the posterolateral urinary bladder wall measuring 20mm*15mm with normal ureteric orifices. Which was resected completely by resectoscope and the specimen was sent to pathology department which reported papillary urothelial carcinoma. WHO/ISUP low grade. WHO grade 1. There is no evidence of muscle invasion. (Fig. 2).

Discussion

We present a rare case of advanced bladder cancer in a young female 24-year-old. Bladder carcinoma in patients under 30 years of age tends to have a early stage and a low grade.⁽⁵⁾

Table I: Impact of age on tumor grade and stage

	<60 yrs	>60 yrs	P- value
Number of patients	245	236	
smokers	170(69.4)	160(67.8)	
Tumor histology			
<i>Transitional cell</i>	236	234	
<i>Squamous cell</i>	3	2	
<i>Adenocarcinoma</i>	6	0	
Grade			
<i>low</i>	125(51.0)	90(38.1)	0.006
<i>high</i>	120(49.0)	146(61.9)	
Stage			
<i>Non muscle invasive(Ta,T1)</i>	189(77.1)	167(70.8)	0.119
<i>Ta</i>	102(41.6)	92(39.0)	
<i>T1</i>	87(35.5)	75(31.8)	
<i>Invasive(T2)</i>	56(22.9)	69(29.2)	

Among various tumors in the urinary system, bladder tumors develop with a comparatively high frequency and are considered to be one of the most significant tumors in clinical practice. Bladder tumors are frequently detected in individuals aged around 65 years, but are rarely found in younger individuals aged less than 40 years. In Europe and North America, the incidence of bladder tumors is estimated to be one in individuals aged 40 years or under and 0.8 in individuals aged 30 years or under.

In Japan, its incidence is estimated to be less than one in individuals aged 30 years or under.⁽⁶⁾

Urothelial carcinoma of the bladder in young patients is rare, and less than 1% of such tumors present in the first four decades of life. Although the biologic behavior and treatment of bladder cancer has been well studied, conflicting reports exist about clinical behavior and prognosis for patients less than 40 years of age. Whether younger patients have a better prognosis than their older counterparts has long been a subject of debate; indeed, some groups observed similar patterns of clinical behavior and prognosis for bladder cancer in young and older patients, whereas other investigators reported lower rates of disease recurrence and progression, and better survival, in younger patient.⁽⁶⁾

Age-specific incidence rates for bladder cancer are typical of most epithelial cancers, with a constant rate of increase with increasing age. For males, bladder cancer more than doubles with each successive age group, while for females, the rate of increase is slightly less than twice. From the youngest age group to the oldest, male

bladder cancer incidence increases 18-fold, while the increase for females is 13-fold.

The most important risk factor for bladder cancer is smoking, followed by certain occupational exposures. The male preponderance of bladder cancer in young adults, although not as striking as that reported for all ages combined, 25 may be attributable to the higher rate of smoking among males before 1985 and to differences in occupation.

The male preponderance has been reported, however, to persist in the absence of tobacco smoke and exposure to occupational hazards, leading to suggestions that unidentified environmental, dietary exposures or hormonal factors may play a role.

Much of the variation in bladder cancer incidence internationally may partly be due to different registration practices for low-grade, or non-invasive, papillomas of the bladder.

Malignant cancer of the urinary bladder constitutes around 71.3% of all urinary tract cancers in Jordan 2002. Compared with epidemiological statistical analysis worldwide Urinary Bladder Cancer in Jordan is far more frequent in males than in females with male-to-female ratio 5.6:1. Age specific incidence rate of bladder cancer increased with increasing age especially in males, (Fig. 3). According to the National Cancer Registry in Jordan few cases were reported before the age of thirty (Table II).⁽⁷⁾ TCC including papillary form was the most predominant histological type; it consists of around 87.9% of all types of bladder cancers in males.⁽⁸⁾

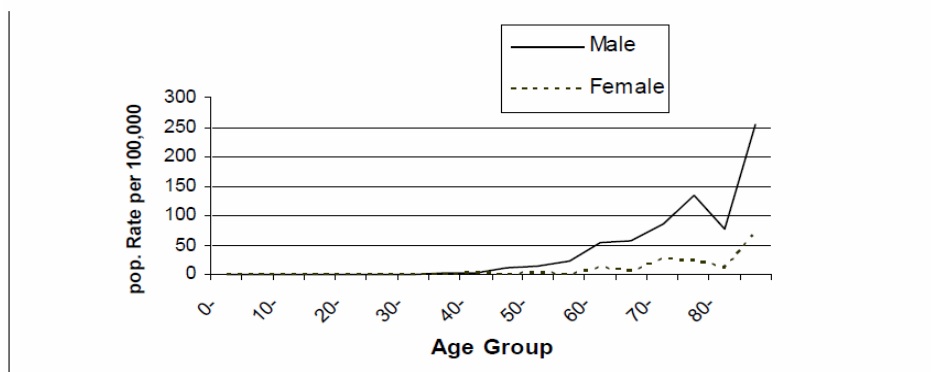


Fig. 3: Age Specific Incidence Rate per 100.000 population by gender/bladder

Table II: Bladder cancer by age and gender

Age group	Male		Female	
	No.	ASIR*	No.	ASIR
0-	0	0	1	0.3
5-	0	0	0	0
10-	0	0	0	0
15-	0	0	0	0
20-	1	0.3	0	0
25-	1	0.4	1	0.5
30-	1	0.5	1	0.5
35-	3	2	0	0
40-	2	1.9	2	1.8
45-	10	11.6	1	1.2
50-	11	15.2	2	2.5
55-	16	22.1	0	0
60-	36	53.8	6	11.9
65-	26	57.7	2	5.7
70-	24	86.2	6	25.8
75-	20	133.1	3	23.6
80-	6	77.7	1	10.3
85+	12	255.6	4	70
Total	169	6.1	30	1.2

*ASIR: Age Specific Incidence Rate per (100,000) population.

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