Case Report

A 23-year-old male with muscle-invasive bladder tumor: A rare case report

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1. Introduction

Cancer of the bladder, also known as urological cancer or urinary bladder cancer, is the 10th most common cancer in the world, and its incidence is steadily rising worldwide, especially in developed nations [1]. It is typically a disease of older individuals; the majority of patients are above 60 years of age at the time of diagnosis [2]. Men are three to four times more likely than women to develop the disease, with a lifetime risk of one in 26 for men and one in 88 for women [1]. Diagnosis of bladder cancer in patients aged <40 years is rare and is extremely rare in patients <30 years of age [3] (see Table 1).

We present a case of young patient with muscle-invasive bladder cancer came to our center after gross hematuria.

This case report examines one such presentation in line with the SCARE guidelines [4].

2. Case report

A 23-year-old young male patient presented to our department of emergency with one episode of painless gross hematuria. Medical history is remarkable for left undescended testis treated surgically at age 3. He has a history of five years of smoking but he takes no illicit drugs. His father had diabetes mellitus type 2. Vital signs were typical. On examination, there was mild tenderness in the left lower quadrant of the abdomen and normal external genitalia. A scrotal examination revealed two normal size testes. Abdominal and pelvis ultrasound showed a 3.66 × 2.63 cm mass on the left wall of the urinary bladder, which had blood supply on color Doppler (Fig. 1). Hemoglobin was 10 × 105 g/dl. Urinalysis showed excess red blood cells and 6–8 WBC/HPF. Complete laboratory tests including complete blood count, liver function tests, alkaline phosphate, and renal function were in a normal range.

After that, the patient underwent cystoscopy under local Anastasia. Cystoscopy revealed left wall mass inside the bladder (Fig. 2). We performed transurethral resection of bladder tumor (TUR-BT) under spinal Anastasia and biopsies were sent to the pathology. The pathology report demonstrated transitional cell carcinoma (TCC) with PT2 staging. After that, the patient underwent computed tomography with contrast for the chest, abdomen, and pelvis. There were no metastases. After engaging the patient in treatment decisions and taking patient consent, he underwent to neoadjuvant cisplatin-based chemotherapy course.

Later, we performed radical cystectomy with bilateral lymph node dissection. Urinary diversion with ileum was performed. The course after surgery was uneventful. The pathology report showed muscle-invasive transitional cell cancer with a free lymph node.

The patient was discharged after four days and was scheduled for follow-up by radiology studies. Follow in the first year with radiological studies showed no metastasis.

3. Discussion

Bladder cancer is one of the most common forms of malignancies involving the urinary system and multiple risk factors have been
associated with its etiology. The peak incidence of bladder cancer (BC) is in the sixth decade of life [3]. Although extremely rare, bladder cancer can be seen in children and young adults, where it usually presents with low-grade, noninvasive disease [1]. Established risk factors for bladder cancer include male sex, older age, white race, occupational exposure to certain chemicals, pelvic radiation, use of medications such as cyclophosphamide, chronic bladder infection/irritation, personal or family history of bladder cancer, and cigarette smoking. It’s presentation usually insidious.

There are a lot of symptoms that can present. Painless hematuria is the most common presenting sign of bladder cancer [5]. Hematuria in young patients should be investigated in detail [2].

Once bladder cancer is suspected, it should be investigated systematically. There are some investigations to make the diagnosis. Abdominal and pelvis Ultrasound is one of them. It raises the suspicion of the malignancy, and then we can perform advanced investigations such computed tomography with or without contrast.

Cystoscopy with biopsy confirms the diagnosis. Herein is a case of muscle-invasive bladder cancer (MIBC) in a young adult patient who had painless gross hematuria for the first time. There was no family history of urothelial carcinoma. He had one important risk factor which is smoking for five years. It is important to evaluate the patient through laboratory tests and imaging studies before choosing the treatment option. Discussion of different options that the patient had should be done before treatment. Currently, neoadjuvant chemotherapy is required before surgery for such a grade. Radical cystectomy with bilateral lymph node dissection was performed on our patient.

Patients should be followed up to detect early metastasis.

Conclusion, although bladder cancer is more common in advanced age, rare cases reported its occurrence in the young patients. Complete investigations should be done to make the diagnosis.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Ethical approval

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Author contribution

Maher Al-Hajjaj: contributed in study concept and design, data collection, and writing the paper.

Oula Abou Alam, Bilal Abu-Hussein, and Muna Alqralleh: Helped in writing and revising manuscript.

Registration of research studies

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There is no conflict of interest.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.amsu.2022.104178.
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