BANGLADESH JOURNAL OF
UROLOGY
Bangladesh J. Urol. 2021; 24(2): 229-231
www.banglajol.info/index.php/BJU
DOI: https://doi.org/10.3329/bju.v24i2.59499

Case Report
ISSN : 2304 - 8514 (Print)
ISSN : 2304 - 8522 (Online)

Urinary Bladder Cancer in Young Adult - A Rare Case Report: Painless Haematuria to be Presenting Symptoms

Abul Bashar Shahriar Ahmed[1], Mohammad Mahfuzur Rahman[2], Rajiv Kumar Mazumdar[3], Abdullah Al Zahid[4], Tapu Nag[5]

Received: 03 - 08 - 2021
Accepted: 19 - 11 - 2021
Conflicts of interest: None

Keywords: Bladder carcinoma, trans urethral resection of bladder tumor, papillary urothelial carcinoma low malignant potential (PULMP).

Abstract

Bladder urothelial carcinoma (UC) it is the fifth most prevalent carcinoma in humans, nevertheless in children and young adults it's very rare. It usually occurs in older adults. We present a 4-year-old boy with a painful microscopic hematuria. Ultrasound revealed a irregular lobulated mass lesion in right supero-lateral wall of urinary bladder and a thick bond extending towards left lateral wall which was confirmed by computed tomography (CT). The first biopsy was compatible with urothelial papilloma. Transurethral resection of the bladder tumor (TURBT) was performed and histopathology showed urothelial neoplasm of low malignant potential (PULMP).

Introduction

Urothelial carcinoma (UC) of the bladder typically occurs in patients in their sixth or seventh decade of life. It's a rare entity in children and young adults. Reportedly, they occur in 1–2.4% of the population younger than 40 years, however only in 0.1–0.4% in the first two decades of life[1–3]. Particularly, urothelial carcinoma accounts for 2.1% of all cancer related deaths. However, the rarity of UC in children makes conclusions related to etiology, invasive potential, treatment, and surveillance difficult. The aim of this study is to report a case of urothelial carcinoma of the bladder in a 4-years old patient, highlighting the clinical presentation, diagnosis, treatment, follow up, and tumor genetic profile.

Case Report:

A 4-year-old male presented with painful macroscopic hematuria for 6 months. A urinary tract ultrasound showed a heterogeneous intravesical mass measuring 23 × 21 mm with papillary projections on the surface. CT scans of KUB with contrast showed a 20 mm mass in the right posterolateral bladder wall and there was no upper tract involvement. Incisional biopsy was performed and histopathology revealed urothelial papilloma. The patient underwent a cystoscopic transurethral resection of the lesion (TURBT).

The histopathological exam was compatible with urothelial neoplasm of low malignant potential, but

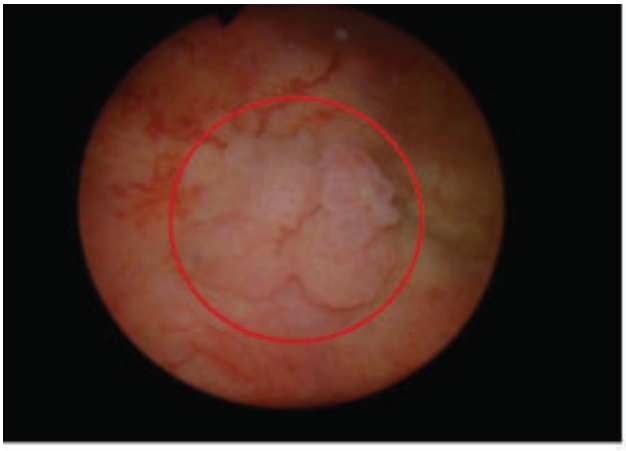

Figure 1: *Cystoscopic view of bladder tumour*

1. Associate Professor & Head, Dept of Urology, Enam Medical College and Hospital
2. Assistant Registrar, Dept. Urology, National Institute of Kidney Diseases and Urology, NIKDU
3. Consultant Urology, St . John Vianney Hospital
4. Medical Officer, Dept of Urology, Enam Medical Colkege and Hospital
5. Medical Officer, Dept of Urology, Enam Medical Colkege and Hospital
Correspondences: Dr Abul Bashar Shahriar Ahmed, Assistatnt Professor, Department of Urology, Enam Medical College and Hospital. Email : drfuadshahriar@yahoo.com Mobile: 01715152482

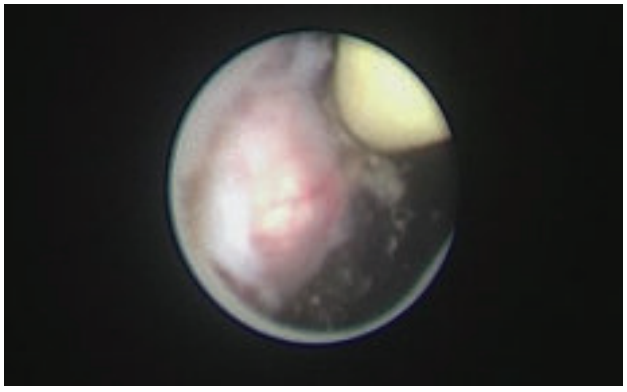

Figure 2: *Resection On progress*

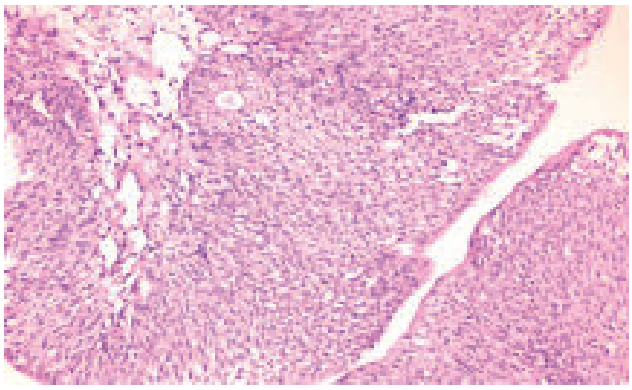

Figure 3: *Papillary Neoplasm with Thick urothelial Lining*

immunohistochemistry favored the diagnosis of low-grade papillary urothelial carcinoma. The specimen was positive for p53 mutation on immunohistochemistry.

Discussion

Urothelial carcinoma of the bladder is extremely rare in children. Its incidence has been reported as 0.4% in individuals aged <20 years and 0.03% in those aged <16 years and the male-to-female ratio is 9:1. Its major symptom in children is painless hematuria. Therefore, although it is a rare condition in children, it should always be considered in the differential diagnosis of hematuria during the first 2 decades of life. Some children may be referred with urinary tract infection and irritative voiding symptoms. Our patient had a history of painful hematuria for 6 months. Concerning diagnostic methods, ultrasound is generally the first choice. Besides its non-invasive nature, it is specific, with no false positives. The use of CT scan should be balanced in young patient because of the costs and the risks of radiation exposure. In our case, ultrasound findings were confirmed by Cystoscopy allows definitive diagnosis and staging and, in many cases, also allows treatment, as it was in the presented case. Histopathological classification of UC, according to the 2004 World Health Organization/International Society of Urological Pathology (WHO/ISUP) criteria: urothelial papilloma, papillary urothelial neoplasm of low malignant potential (PUNLMP), low-grade (LG) papillary urothelial carcinoma, and high-grade (HG) papillary urothelial carcinoma. Patients with urothelial papilloma have a low incidence of recurrence and rarely progress to develop urothelial carcinoma. Our patient's first histopathological exam was consistent with urothelial papilloma. However, the lesion he presented 6 months later was classified as a low-grade papillary urothelial carcinoma. The treatment of choice for bladder UC is transurethral resection of the bladder tumor (TURBT), with good results and low recurrence rate. Another option is to do an open resection, but this is reserved for patients with high-grade lesions. For our patient we elected TURBT, and so far, he has no recurrence after six months of follow-up. Cystoscopy is the best diagnostic tool for detecting any recurrence. On the other hand, the low recurrence rate in papilloma and low-grade tumors may allow following these patients with urinary cytology and bladder ultrasound alone. The intensity of follow-up should be proportional to the risk of disease recurrence or progression.

Conclusion

Although rarely encountered during childhood, urothelial carcinoma should be considered as a differential diagnosis in pediatric patients with hematuria. The management of urothelial carcinoma in children could be challenging, especially in poor resource setting associated with ignorance.

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