Haematuria caused by bladder cancer in the paediatric setting

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ABSTRACT

Bladder cancer is a rare disease in childhood; however, it is one of great clinical significance. Investigation and management follow a tailored approach, which is largely driven by clinical practice patterns in adult patients with the disease. We present the case of bladder cancer in a boy who presented to the primary care practitioner with visible haematuria. This case highlights the need for clinicians to consider malignancy as a possible cause for haematuria when assessing and investigating children with this presenting complaint.

KEYWORDS

Paediatric – Bladder cancer – Haematuria

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Background

Paediatric bladder cancer is rare in the paediatric population. However, the incidence has increased as determined by population-based studies such as the Surveillance, Epidemiology and End Results database.¹ We report a case of bladder cancer in a teenage boy who presented with visible haematuria.

Case history

A 15-year-old boy was referred by his general practitioner with episodes of visible haematuria. This was associated with some urinary urgency and sensation of incomplete bladder emptying. These symptoms resolved spontaneously, and urinary culture had confirmed that there was no infection. The patient had no past medical history of note and was otherwise fit and well. Ultrasound was expedited and the result suggested a bladder mass in the posterior wall (Fig 1). He proceeded to rigid cystoscopy under general anaesthesia, which showed a papillary growth above the left ureteric orifice (Fig 2). No other intravesical abnormality was recorded. Excision biopsy of the tumour was performed and the sample sent for histological evaluation. This revealed low-grade G2 pTa urothelial carcinoma of the bladder. Magnetic resonance imaging (MRI) confirmed no extension of the disease. The patient proceeded to cystoscopic surveillance, initially at three months, and remains recurrence free at 18 months to date.

Discussion

There is a limited body of research into this area. This owes largely to the rarity of the disease in this age group and, as a result, the highest level of evidence available to guide management is predominately restricted to retrospective case series and reports. As such, most cases do follow a tailored approach, but this is typically based on clinical pathways in common use for the adult population. Treatment algorithms including instillation of

Figure 1 Ultrasound of bladder showing mass on posterior wall.

bacillus Calmette–Gu–rin and cystectomy have been reported in severe disease.² However, given that the majority of paediatric cases (more than 85%) are low grade, endoscopic resection is usually sufficient alone (in over 89% of cases).⁵ However, in contrast to the diagnostic pathway in adults, ultrasound is usually adopted as the first-line radiological investigation of choice rather than

computed tomography urography. MRI can subsequently follow to support this choice, as required.

While paediatric bladder cancer is rare, its incidence is increasing and clinicians should consider malignancy as a possible differential diagnosis when assessing and investigating children presenting with haematuria.

Figure 2 Endoscopic view of papillary lesion.

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