

Secondary nonmonosymptomatic enuresis diurna as the first manifestation of transitional cell papillary carcinoma of the bladder in a 14-year-old girl

On dört yaşında bir kız çocuğunda sekonder nonmonosemptomatik enürezis diurna ile kendini gösteren transizyonel hücreli papiller mesane karsinomu

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ABSTRACT

A 14-year-old girl presented with secondary nonmonosymptomatic enuresis diurna and urge incontinence. The patient had no history of medical, psychological or behavioral problems. Systemic physical and neurological examinations and laboratory investigations revealed no abnormality. An ultrasound showed an intravesical tumor that was subsequently excised. Histopathology revealed transitional cell papillary bladder carcinoma of low-grade malignancy. All previously reported cases have presented with the symptoms of gross hematuria or urinary tract infection. To our knowledge, this case represents the first childhood case of transitional cell carcinoma of the bladder presenting with secondary nonmonosymptomatic enuresis diurna and urge incontinence. Additionally, our experience with the above case suggests that the investigation of secondary enuresis symptoms should be thorough and include a cystoscopic examination.

Key words: Bladder cancers; childhood; secondary enuresis.

ÖZET

On dört yaşında bir kız hasta acil idrar kaçırma hissi ve sekonder nonmonosemptomatik enürezis diurna ile başvurdu. Öyküsünde tıbbi, psikolojik veya davranışsal problemlere rastlanmadı. Sistemik fizik ve nörolojik muayeneleri normaldi. Laboratuvar değerlendirmelerinde herhangi bir patolojik bulgu saptanmadı. Ultrasonografik incelemede intravezikal tümör saptanan hastanın, eksizyonel biyopsi sonucu düşük dereceli, transizyonel hücreli papiller mesane karsinomu olarak değerlendirildi. Bugüne kadar literatürdeki transizyonel hücreli mesane karsinomu vakalarının ilk başvuru semptomları gross hematüri veya idrar yolu enfeksiyonu şeklinde bildirilmiştir. Bizim bilgilerimize göre bu vaka, çocukluk çağında sekonder nonmonosemptomatik enürezis diurna ve acil idrar kaçırma hissi ile başvuran ilk transizyonel hücreli mesane karsinomu vakasıdır. Bu vakadan edindiğimiz tecrübeye dayanarak, sekonder enürezis diurna ile başvuran vakaların daha detaylı araştırılmasını ve gerekli vakaların sistoskopik incelemesinin yapılmasını önermekteyiz.

Anahtar sözcükler: Çocukluk çağı; mesane kanserleri; sekonder enürezis.

Introduction

Bladder tumors rarely occur in the first two decades of life, and they are commonly of mesodermal origin.^[1,2] The most common presentation is painless gross hematuria, and most tumors are grade 1 transitional cell carcinoma (TCC). Low-grade lesions, definitive cystoscopic management and a low recurrence rate are uniform findings.^[1-3] Recurrence, invasion and death are rare, but they have been reported.^[4] We report a case of a 14-year-old girl with

low-grade transitional cell papillary bladder carcinoma who presented with secondary nonmonosymptomatic enuresis diurna as the first manifestation.

Case report

A 14-year-old girl was admitted to our institution with secondary nonmonosymptomatic enuresis diurna. She had been complaining of urgency, an increase in voiding frequency, a weak and intermittent stream, a sensation of

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Submitted:
20.06.2011

Accepted:
21.07.2011

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incomplete emptying, and both day-time and nocturnal wetting for 6 months. Her familial and medical histories were unremarkable. There were no histories of psychological or behavioral problems or exposure to any chemotherapeutic agents or trauma. Systemic physical and neurological examinations revealed no abnormality. Normal or negative investigations included complete blood count, urinalysis, C-reactive protein, electrolytes, glucose, and thyroid, hepatic and renal function tests. Urine cultures were sterile on two occasions, and fecal parasite examinations were negative on three. Both the urine flow pattern and bladder capacity were normal on urodynamic testing, but only a small amount of post-void residual urine was detected. Abdominal ultrasonography showed an 11x7 mm intravesical papillary lesion located on the right posterior wall of the bladder. Cystoscopy demonstrated a papillary lesion adjacent to the right ureteral orifice, and a transurethral resection was performed. **Histopathology:** The specimens received for pathological examination were grayish-white and somewhat papillary in appearance, with the largest fragment measuring 7 mm in its longest diameter. All of the tissue was processed. When examined, the sections revealed a papillary neoplasm and areas of apparently normal bladder (Figure 1). The nuclei showed uniformity, with no significant atypia or mitotic activity, and the polarity was preserved (Figure 2). Pleomorphism was not observed. The other fragments showed the typical urothelium of the normal urinary bladder. Invasion of the lamina propria was not observed. The final diagnosis was *papillary urothelial neoplasm of low malignant potential*. Immunohistochemical analyses were performed for p53 and Ki-67 using the streptavidin-biotin complex immunoperoxidase technique. Ki-67 (Clone SP&, Labvision, 1/200) rabbit monoclonal antibody and p53 (Clone DO-7 + BP53-12, Neomarkers, 1/200) mouse monoclonal antibody were used. Nuclear immunostaining demonstrated that 1% of the tumor cells were p53 positive, and there was a <1% proliferation index with Ki-67. The secondary nonmonosymptomatic enuresis diurna and urgency symptoms resolved within a few weeks. During a 2-year follow-up period with urine cytology, vesical ultrasound and check cystoscopy, the patient showed no evidence of recurrence.

Discussion

Primary benign or malignant bladder epithelial tumors are uncommon in childhood. Less than 150 cases of TCC of the bladder have been reported in the pediatric population, and all of them presented with painless gross hematuria or urinary tract infection.^[2] Wilson-Storey et al.,^[5] reported the only case that presented with the clinical features of acute appendicitis. Large series have described the characteristics of these tumors as low grade, noninvasive and seldom recurring.^[2,4,6] A review of the 25 patients younger than 10 years old with TCC of the

bladder revealed that only 3% had lamina propria invasion.^[7] Transurethral resection or fulguration is the treatment of choice, and the prognosis is favorable.^[1]

Enuresis is defined as the repeated, spontaneous voiding of urine during sleep in a child five years or older. Enuresis may be classified as primary or secondary and monosymptomatic (uncomplicated) or nonmonosymptomatic (i.e., concomitant lower urinary tract symptoms are present). Children with primary nocturnal enuresis are monosymptomatic, have no lower urinary tract symptoms other than nocturia, and have no history of bladder dysfunction.^[8] Various factors contribute to the development of secondary enuresis, most notably, bladder dysfunction, constipation, hyperthyroidism, chronic renal

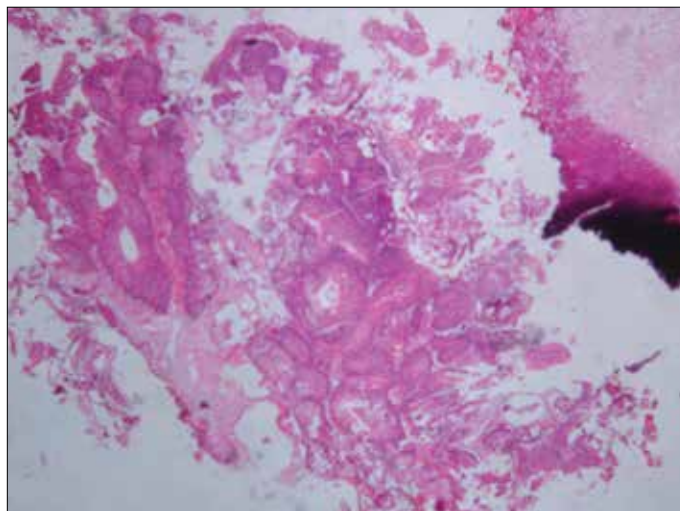


Figure 1. A low-power view of the papillary neoplasm X40, Hematoxylin-Eosin

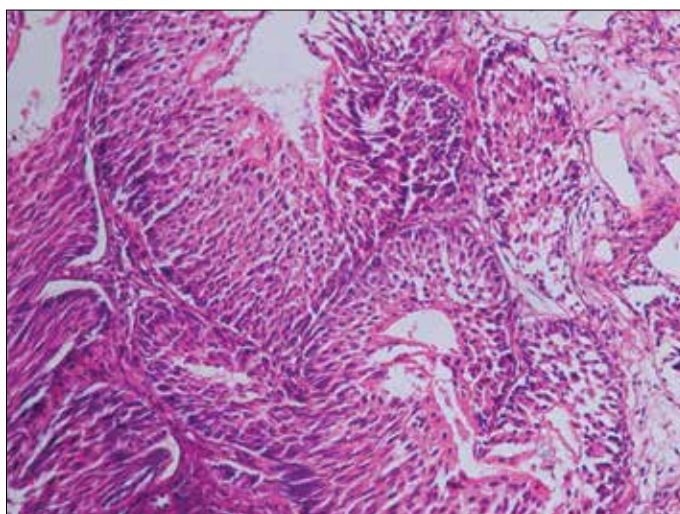


Figure 2. The papillary neoplasm displaying uniformity with no significant atypia or mitotic activity X400, Hematoxylin-Eosin

failure, diabetes insipidus, diabetes mellitus, obstructive sleep apnea, psychological stress, seizure disorders and urinary tract infections.^[8,9]

In our case, the patient had negative histories of medical, psychological or behavioral problems. Systemic physical and neurological examinations and laboratory investigations associated with the known contributing factors to the development of secondary enuresis revealed no abnormality. Her medical and familial histories were also negative for smoking, exposure to radiation/chemotherapeutic agents or previous cancer. The detection of an intravesical tumor by ultrasonographic and cystoscopic examinations was a surprise.

Even though most cases of TCC of the bladder in childhood present with gross hematuria or urinary tract infection, our experience with the above case suggests that the investigation of secondary enuresis symptoms should be thorough and include a cystoscopic examination.

Conflict of interest

No conflict of interest was declared by the authors.

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