Coexistent urothelial papilloma and ureteric calculus in an 8-year-old child: A rare co-occurrence

Urinary bladder tumors are rare causes of hematuria in children, common causes being urinary tract infections, trauma, and urethral meatus irritation.\(^1\)

An 8-year-old male child, complained of intermittent, colicky, nonradiating right lumbar pain since 2 years. There was history of intermittent hematuria once in 15–20 days also for 2 years. There was no history of fever. No family history of similar complaints was elicited. The general examination was normal. The abdomen was soft. There was minimal tenderness in the right iliac fossa. The investigations revealed hemoglobin 13.4 gm/dL, total leucocyte count 9800/cmm, differential count – polymorphs 52%, lymphocytes 48%, and platelet count 4 lac/cmm. Urine routine examination was reported as a pale yellow clear urine along with leucocytes 30–40/hpf, red blood cells 2–3/hpf, epithelial cells 1–2/hpf, and few bacteria. Primary smear did not show pus cells or organisms. Urine culture showed absence of growth of bacteria. Serum blood urea nitrogen was 7.2 mg/dL and creatinine was 0.62 mg/dL. Serum electrolyte levels were normal. Serum calcium, phosphorus, and uric acid were 10.7, 4.3, and 4.1 mg/dL, respectively. Serum alkaline phosphatase was 255 U/L (normal range 50–370 U/L) and parathormone was 13.4 pg/mL (normal range: 11–69 pg/mL). Both kidneys showed normal cortical tracer concentration on 99M-TC-DMSA renal cortical scan. Ultrasonography and computed tomography of the right kidney showed hydronephrosis and hydroureter. The distal ureter showed an obstructive calculus measuring 9.4 mm × 8.9 mm.

The urinary bladder showed an ill-defined vascular soft tissue mass measuring 2.4 cm × 0.8 cm × 1.3 cm in the region of right vesico-ureteric junction [Figure 1a]. The radiologic impression of the soft-tissue mass was a papilloma or mucosal prolapse. The patient underwent cystoscopic biopsy of the mass followed by laparoscopic right ureterolithotomy. The report of stone analysis revealed the presence of uric acid, phosphates, xanthine, calcium, magnesium, oxalate, and ammonia. We received two biopsy bits measuring 0.3 and 0.2 cm. The histology showed a tumor with papillary configuration without nuclear atypia [Figure 1b and c]. It satisfied the criteria for urothelial papilloma. The child is well six months postoperatively.

The commonest urinary bladder neoplasm in children is a rhabdomyosarcoma.\(^2\) Urothelial tumors are uncommon in pediatric population with an incidence of 0.1%–0.4% in patients younger than 20 years.\(^3\) The urothelial tumor commonly seen in this age group is a papillary urothelial neoplasm of low malignant potential (PUNLMP) or a low-grade urothelial carcinoma.\(^4\) Papillomas are rare. They are reported usually as single case reports or comprise very few cases among larger series on urothelial tumors. On review of literature, series on urothelial tumors in children comprising 23, 34, 11 and 59 cases have found only 2, 1, 2 and no cases of papilloma, respectively.\(^5-6\)

Most papillomas are found near one of the ureteric orifices as seen in our case also.\(^1\) Painless gross hematuria is usually the presenting complaint. The diagnosis of a urothelial papilloma requires a high index of suspicion as other causes of hematuria predominate in pediatric age group.\(^1\) In our patient, hematuria can be attributed to urinary tract infection or the ureteric calculus or the papilloma itself. Investigations done for the calculus disease did not reveal any metabolic abnormality. The association of urothelial bladder carcinomas with bladder calculi has been reported in adults along with the other common risk factors like smoking.\(^5\) No particular association has been reported with papillomas or in children or with ureteric calculi. This is a rare case of coexistent urothelial papilloma and a ureteric calculus in a child.

Declaration of patient consent
The authors certify that appropriate patient consent was obtained.

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Conflicts of interest
There are no conflicts of interest.

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