

IMAGES IN CLINICAL MEDICINE

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Urothelial Carcinoma



*A video showing
protrusion of the
mass is available
at NEJM.org*

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A 69-YEAR-OLD WOMAN PRESENTED TO THE EMERGENCY DEPARTMENT WITH NEW-ONSET GROSS HEMATURIA. Her medical history was notable for 20 pack-years of smoking. Results of a physical examination, complete blood count, and metabolic panel were normal. Urinalysis showed more than 100 red cells per high-power field and 5 to 10 white cells per high-power field. A urine culture was negative, and results of urine cytologic testing showed no malignant cells. A computed tomographic urogram showed a filling defect in the right ureter. Examination of the bladder with a rigid cystoscope revealed a papillary mass that protruded through the right ureteral orifice during ureteral peristalsis (see video). In a ureteroscopic examination, it was determined that the mass was 4 cm in length and had a cylindrical stalk that was 5 mm in diameter; numerous smaller distal ureteral masses were also revealed. Biopsy was performed, and pathological examination confirmed the diagnosis of papillary urothelial carcinoma. Smoking and other chemical exposures are risk factors for urothelial carcinoma. After discussion of the treatment options, the patient elected to undergo robot-assisted laparoscopic nephroureterectomy with excision of a bladder cuff. The final pathological evaluation showed high-grade, multifocal urothelial cancer along the ureter, with negative surgical margins. Three months after the procedure, the patient was well and had no further hematuria, and surveillance cystoscopy showed no evidence of disease recurrence.

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