Partial intestinal obstruction and hematuria as the initial presentation of bladder cancer in a Hispanic woman with a complex medical history

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CASE

A 57-year-old Hispanic woman with a history of systemic lupus erythematosus (SLE) complicated with lupus nephritis and kidney failure requiring renal transplantation five years ago presented for evaluation of hematuria, urgency, frequency, progressive pelvic fullness, unintentional weight loss of 5 kilograms, and a two-week history of constipation associated with nausea and fatigue. Her current immunosuppression regimen included mycophenolate mofetil, tacrolimus, and prednisone. Additional history included renal

cell carcinoma (RCC) and bilateral nephrectomy. On examination, a large, firm, heterogenous, and tender pelvic mass was noted. Laboratory work-up showed mild normocytic normochromic anemia with a hemoglobin level of 86 gm/dL (normal 12.0–16.0), acute kidney injury with a blood urea nitrogen concentration of 34 mg/dL (normal 6–21), and creatine concentration of 2.3 mg/dL (normal 0.5–1.2).

Abdomen and pelvis computed tomography showed a large pelvic mass arising from the bladder compressing the rectum (Figure 1 Panel A, B) with



Figure 1. Panel A, B: Coronal and sagittal CT abdomen and pelvis showing a large pelvic mass arising from the bladder compressing on the rectum (Arrow).

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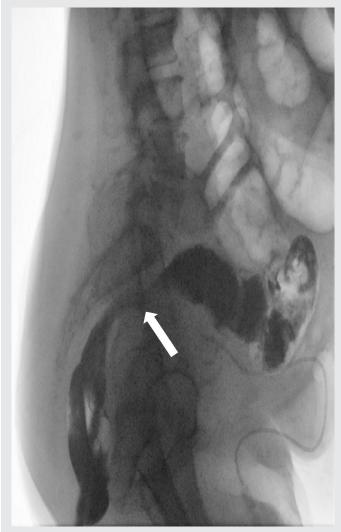


Figure 2. Barium enema showing an apple core appearance of the sigmoid colon and rectum with partial large bowel obstruction (Arrow).

significant hydroureteronephrosis of the transplanted kidney. An ultrasound-guided percutaneous nephrostomy tube was placed with gradual improvement of her renal functions. Barium enema showed an apple core appearance of sigmoid colon and rectum with partial large bowel obstruction (Figure 2). Histopathological examination of ultrasound-guided pelvic mass biopsies showed poorly differentiated uroepithelial carcinoma positive for pan-CK, CK7, GATA-3 and negative for PAX-8, p16, PR, ER, desmin, CDX2, CD31, and 34 by immunohistochemistry.

Due to worsening abdominal symptoms and an unresectable mass, she underwent a diversion loop colostomy. The initial management plan included starting chemotherapy (gemcitabine/carboplatin regimen) to reduce the tumor size, followed by total resection, and colostomy reversal based on the residual tumor burden. Unfortunately, after her third chemotherapy cycle, she developed a neutropenic fever and vancomycin-resistant enterococcus urinary tract infection and opted for comfort care.

Patient has signed a consent for publication of this case report.

Discussion

This case describes the complex proposed synergistic pathogenesis of metachronous primary malignancies, which can be associated with a genetic or ethnic predisposition or autoimmune history and chronic immunosuppression. Higher RCC incidence at a younger age and with a worse prognosis are reported in African Americans and Hispanics, who also have worse SLE outcomes, such as lupus nephritis. 1,2 It has also been suggested that SLE patients treated previously with cyclophosphamide and transplant recipients have a higher incidence of bladder cancer with a higher stage at presentation compared to the general population.3 Previous research has identified this association and suggested that inflammation, stemming from cyclophosphamide treatment and SLE, could be potential triggers for cell damage and carcinogenesis.4,5

In addition, studies have demonstrated an elevated expression of urothelial carcinoma-associated 1 protein and protein kinase B in patients with SLE, particularly in females with active disease or organ damage. These findings, along with classical risk factors, would support the use of earlier diagnostic or screening strategies for urothelial cancer in patients with SLE, but there are limited data on this association. Whatever the sequence of events, the cornerstone of bladder cancer is cytoreductive surgery with or without chemoradiation and/or immunotherapy based on tumor staging. The immunotherapy based on tumor staging.

Keywords: Systemic lupus erythematosus, renal cell carcinoma, uroepithelial carcinoma of the bladder, bowel obstruction

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