Case Report

Case Report of a Rare Presentation of Urothelial Carcinoma With Gastric Metastasis

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Clinical Practice Points

- Bladder cancer is the most common genitourinary malignancy, with a prognosis largely dependent on the stage and pathologic characteristics of the tumor.
- Micropapillary urothelial carcinoma (MPUC) is an uncommon variant of urothelial carcinoma (UC) with an aggressive course and poor prognosis.
- We report the case of an 82-year-old man with history of stage T1 bladder UC with no evidence of local recurrence, who presented 4 years later with dysphagia, melena, and a gastric mass.
- The morphologic features and immunohistochemical profile of a gastric biopsy were consistent with metastatic UC with micropapillary morphology. The patient underwent subsequent chemoradiotherapy but died 3 months later.
- Our report is the first to describe the symptomatic presentation of a gastric metastasis of UC.
- The insidious nature and rapid progression highlight the typical features of MPUC and the need for methods to earlier identify this rare and consequential variant of UC.

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Introduction

Bladder cancer is the most common malignancy of the urinary tract and is a heterogeneous disease with a variable prognosis and progression largely dependent on the pathologic characteristics and tumor stage.[1] Approximately 75% to 85% of patients with bladder cancer are found to have superficial disease confined to the mucosa (stage Ta, carcinoma in situ) or lamina propria (stage T1).[2] Treatment of superficial bladder cancer often involves initial transurethral resection and subsequent intravesical therapy.[2] The risk of recurrence for superficial cancers at 1 year has ranged from 15% to 70%, and the risk of progression at 5 years has ranged from 7% to 40%, depending on the specific histopathologic features of the cancer.[3,4] Tumors with muscle invasion (stage T2), alternatively, confer a significant risk of metastatic spread.[3]

Metastatic disease, present in approximately 4% of cases of bladder urothelial carcinoma at diagnosis, is associated with a poor prognosis.[5] Multiple studies examining the characteristics of metastatic bladder cancer both clinically and at autopsy have found the most common metastatic sites to be lymph nodes, bone, lung, liver, and peritoneum.[6-9] Nearly one half of patients with metastatic disease have involvement of $\geq$ 3 sites.[6]

In the present report, we describe the evaluation of a patient with a distant history of stage T1 bladder cancer presenting with new dysphagia and melena, ultimately revealing a rare manifestation of metastatic recurrence of urothelial carcinoma.

Case Report

An 82-year-old man with coronary artery disease, atrial fibrillation, asthma, and no smoking history presented to the emergency department complaining of dysphagia and dark, tarry stools. He underwent esophagogastroduodenoscopy (EGD), which revealed a mass in the gastric antrum. Subsequent fine needle aspiration found atypical epithelioid cells, suspicious for a submucosal neoplasm. Two weeks later, he underwent a repeat EGD with biopsies. The hematoxylin and eosin sections of the gastric biopsy showed cytologically bland carcinoma in a submucosal location with no in situ component (Figure 1A). Tumor was also extensively present in the mucosal lymphovascular spaces (Figure 1B). Therefore, metastatic carcinoma was suspected, and immunohistochemical stains were performed. The tumor was positive for CK7, p63, and GATA3, consistent with metastatic UC. Focally, micropapillary morphology

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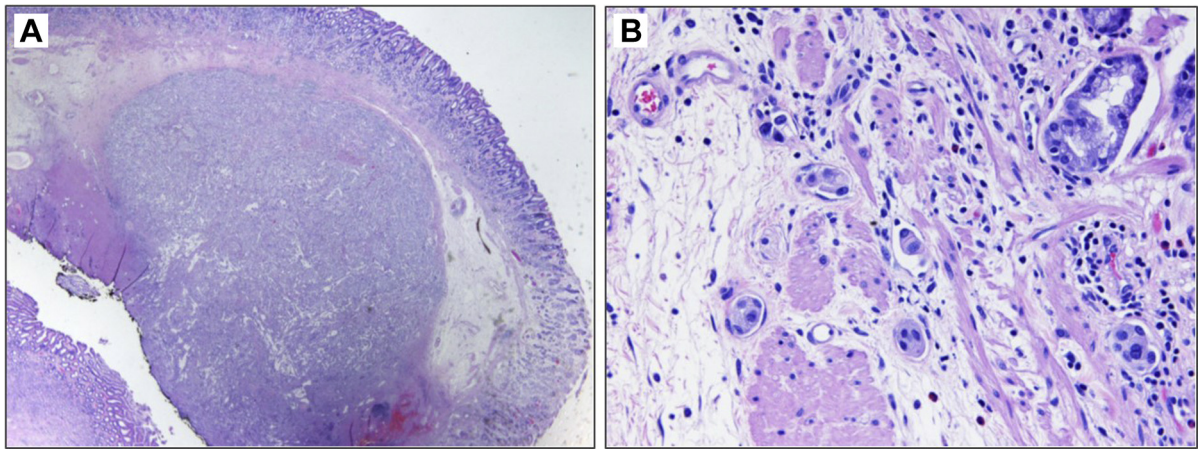
Figure 1 Gastric Biopsy. (A) Hematoxylin and Eosin-Stained Section of the Gastric Biopsy Showing Submucosal Mass With Overlying Gastric Mucosa (Original Magnification ×2). (B) Hematoxylin and Eosin-Stained Section of the Gastric Biopsy Showing Carcinoma in Mucosal Lymphovascular Spaces (Original Magnification ×60)



was present. During the next week, the patient had increasingly tarry stools and fatigue and returned to the emergency department. He was found to be anemic, and repeat endoscopy showed a nonbleeding ulcer in the antrum of the stomach. Further workup, including a chest radiograph and chest computed tomography (CT) scan, revealed a 7-cm mass in the lower lobe of the left lung. The biopsy specimen from the lung showed carcinoma with similar cytomorphology to the patient's original transurethral resection specimen, although the micropapillary component was absent. The lung biopsy was positive for CK7 and negative for thyroid transcription factor-1. A CT scan of the abdomen and pelvis was notable for diffuse thickening of the stomach, with no visible bladder abnormalities (Figure 2). A positron emission tomography scan was notable for hypermetabolic areas in multiple organs. Brain magnetic resonance imaging revealed left cerebellar and cerebral lesions.

Four years before this presentation, the patient had been diagnosed with UC of the bladder after multiple episodes of gross hematuria. Transurethral resection of bladder tumor (TURBT) at that time was consistent with stage T1 high-grade papillary UC with no muscularis propria present in the specimen and a small component of micropapillary differentiation seen in a noninvasive portion of the tumor. A repeat TURBT 1 month later showed changes from the previous biopsy and contained muscularis propria but revealed no evidence of UC. He was treated with 6 weeks of induction intravesical bacille Calmette-Guérin (BCG) therapy. This was followed

Figure 2 Abdominal and Pelvic Contrast-Enhanced Computed Tomography Scans. (A) Cross-Section Showing Markedly Thickened Stomach Secondary to Gastric Metastasis. (B) Cross-Section of Bladder Demonstrating No Visible Abnormalities or Masses