CASE REPORT

Large bowel obstruction resulting from bladder transitional cell carcinoma metastasis: a common cancer presenting in an uncommon manner

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Abstract

Transitional cell carcinoma (TCC) and large bowel obstructions are both common disease processes typically considered unrelated. Presented below is the case of a 49-year-old male with a large bowel obstruction caused by a bladder TCC metastasis. One year prior to large bowel obstruction presentation, the patient had a T², Grade III TCC of the bladder with no nodal involvement or metastasis, which was removed via radical cystoprostatectomy. This case serves as a reminder that cancer, despite common pathogenesis patterns, can present in atypical ways.

INTRODUCTION

Urothelial carcinoma, otherwise known as transitional cell carcinoma (TCC), comprises the majority of malignancies of the urinary system in the USA and Europe. Most commonly, this malignancy will present with hematuria, dysuria and a multitude of constitutional symptoms [1]. Smoking is considered the most common risk factor for TCC. It is estimated that up to half of all bladder cancers are caused by cigarette smoking and that smoking increases a person's risk of bladder cancer two to four times above baseline [2]. The vast majority of metastasis from TCC is to the liver, lung, mediastinum and bone [3].

Large bowel obstructions comprise 20% of all intestinal obstructions, with the most common site being the sigmoid colon. Of those, 90% of large bowel obstructions are caused from either colonic malignancy or diverticulitis [4]. Patients with large bowel obstructions will often present with abdominal distension and cramping pain with variable nausea and vomiting. On computed tomography (CT) scan, thin-walled, dilated loops of large bowel are appreciated with narrowing at the origination site.

After extensive review of the literature, the uniqueness of this reported case becomes apparent. This case is only the second written report of bladder cancer metastasis to the large bowel and the first recorded report of urothelial carcinoma leading to a large bowel obstruction [5].

CASE REPORT

A 49-year-old African-American male presented to the emergency room with abdominal distention and significant weight loss. The patient’s surgical history was significant for radical cystoprostatectomy with appendectomy and creation of a Mainz pouch. The family history was noncontributory, and the patient is a nonsmoker.

Upon examination of prior records, the patient was noted to have been admitted to the hospital 1-year previously for significant gross hematuria with impending clot retention. Cystoscopy

Received: April 22, 2015. Accepted: June 26, 2015
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showed a 6-cm mass with stippled calcifications located 3 cm lateral and superior to the left ureteral orifice. The tumor appeared broad based. CT scan showed no evidence of extravesicular disease. Transurethral resection of the entire bladder tumor was attempted; but due to the extent of tissue invasion and a drop in the patient’s core temperature, the operation was aborted. Resection pathology confirmed a T2, Grade III TCC of the bladder.

One week later, a radical cystoprostatectomy with appendectomy and creation of a Mainz pouch was performed. Pathologic examination showed a poorly differentiated Grade III TCC between the smooth muscle bundles invading through the muscularis. There was no evidence of any tumor extension into the bladder neck, prostate gland, nor any nodal metastasis. Final staging was T2B N0M0. Additionally, a low-grade well-differentiated prostatic adenocarcinoma consistent with Gleason’s score of 4 was found.

Approximately 1 year after the cystoprostatectomy with a Mainz pouch, the patient presented with abdominal distension and weight loss and was admitted to the hospital for a sigmoidoscopy attempting to determine the etiology. The patient was given 100 mg of Demerol and 3 mg of Versed, but the procedure was aborted due to significant resistance met with the sigmoidoscope and excruciating pain. A barium enema was done showing an apple core lesion in the descending colon and sigmoid region with a large bowel obstruction. The patient elected to undergo left hemicolectomy with transverse colon end colostomy. Intraoperatively, a large descending colon mass, adherent to the left abdominal wall was identified and completely excised.

Pathologic examination revealed a 12.7-cm tumor, consistent with TCC. The tumor was found to ulcerate through the overlying mucosa of the colonic epithelium, with 5 of 23 mesenteric lymph nodes positive for metastatic involvement. The colonic and bladder specimen pathology were compared. Both the specimens were consistent with TCC.

The patient experienced no postoperative complications and made an uneventful recovery and was discharged June 2001. He continues to follow up with his urologist and oncologist on a regular basis. The patient was last seen by his oncologist in March 2015. He has no evidence of recurrent disease and is now celebrating his 13th year cancer free.

DISCUSSION

TCC of the bladder and large bowel obstructions are two processes that are generally considered to be separate entities. Most commonly, a large bowel obstruction will result from a primary colonic adenocarcinoma. Upon review of this case, it becomes apparent that cancer metastases from distant sites can present in diverse ways. In this patient, a 12.7-cm metastatic TCC was found in the sigmoid colon 1-year post-resection of a T2, Grade III TCC of the bladder. The lesion was subsequently removed, and the patient has been disease free over 10 years. This case serves as a reminder that cancer is an ever-evolving pathogenic process. Although metastases commonly follow specific routes, metastatic disease can always present in unique ways. Therefore, metastatic disease, in a patient with a previous cancer, must always be considered in the differential diagnosis of a new and otherwise unexplained pathogenic process with an ill-defined etiology.

CONFLICT OF INTEREST STATEMENT

None declared.

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