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Case Report

A Rare Case of Multiple Ulcerated Colonic Masses due to Metastatic Gastric Signet Ring Cell Carcinoma

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Abstract

We report a case of gastric signet ring cell carcinoma with metastasis to the lymph nodes, peritoneum, spine, and rare spread to the colon. The diagnosis was made on pathologic examination from endoscopic and colonoscopic biopsies. Potential mechanisms include lymphatic spread, hematogenous spread and direct gastrointestinal lumen implantation.

Keywords: Gastric signet ring cell carcinoma; Endoscopy; Ulcerated masses; Colonoscopy

Introduction

Gastric signet ring cell carcinoma (GSRCC), a subtype of gastric carcinoma, contains poorly cohesive single cells with large vacuoles of mucin, appearing like a signet ring. GSRCC is known for its late-stage presentation, poor response to chemotherapy, and poor prognosis. Typical metastasis courses include the lymph nodes, peritoneum, and spine [1]. We report a case of primary GSRCC with multiple metastatic masses to the colon confirmed with biopsy.

Case Presentation

A 50-year-old man with no previous medical history reported symptoms of nausea, abdominal bloating, loose stools, solid-food dysphagia, shortness of breath, and a 12-pound weight loss over a period of two months. Additionally, he noticed bright red blood in his stool. However, he denied having heartburn, fevers, night sweats, chills, NSAID use, previous endoscopy, or colonoscopy. His physical exam was significant for pallor and a distended, non-tender abdomen. Laboratory tests revealed abnormal levels of LDH, alkaline phosphatase, AST, ALT, ferritin, and hemoglobin, but normal levels of total bilirubin and INR. During Esophagogastroduodenoscopy, a large ulcerated friable and firm sessile mass was found extending from the gastroesophageal junction along the lesser curvature of the stomach to the proximal antrum, in addition to class A esophagitis (Figure 1). Colonoscopy revealed multiple ulcerated masses that caused localized luminal narrowing throughout the colon (Figure 2). Gastric and colonic mass biopsies confirmed the presence of primary GSRCC without H. pylori gastritis (Figure 3). Computer tomography of the chest, abdomen, and pelvis with contrast revealed esophageal and gastric wall thickening, retroperitoneal lymphadenopathy, large-volume abdominal/pelvic ascites, and sclerotic lytic bone lesions in C7 and T8. Abdominal paracentesis cytology confirmed the presence of high-grade malignant cells, consistent with metastatic GSRCC. The patient was treated with 14 cycles of chemotherapy and immunotherapy with Folinic Acid, Fluorouracil, Oxaliplatin (FOLFOX), and nivolumab for stage IV gastric cancer. His symptoms progressed with malignant pleural effusions requiring indwelling pleural catheters, and bilateral lower extremity weakness due to spinal metastases, which were refractory to dexamethasone and spinal radiation. Chimeric antigen receptor T-cell (CAR-T) with pending second-line chemotherapy was started; unfortunately, the patient developed septic shock and multiorgan failure, and was placed on comfort care.

Discussion

Gastric signet ring cell carcinoma is a diffuse type of gastric cancer in the Lauren classification system and is defined separately in the WHO classification. GSRCC is a poorly cohesive carcinoma that invades local tissue and commonly spreads to the lymph nodes, peritoneum, and spine [1]. However, this patient presented with multiple metastatic GSRCC masses throughout the colon which is atypical and rare. Potential mechanisms if GSRCC metastasis to the colon include the lymphatic system, hematogenous spread, and direct gastrointestinal spread [2]. Treatment of GSRCC include endoscopic therapies, radical gastrectomy with lymph node dissection, and/or fluorouracil or platinum-based chemotherapies (although no gold standard exists for advanced GSRCC) [3]. Most GSRCC have chemotherapy resistance and cancer recurrence resulting in an overall 5-year survival of stage IV disease of 10.2%.

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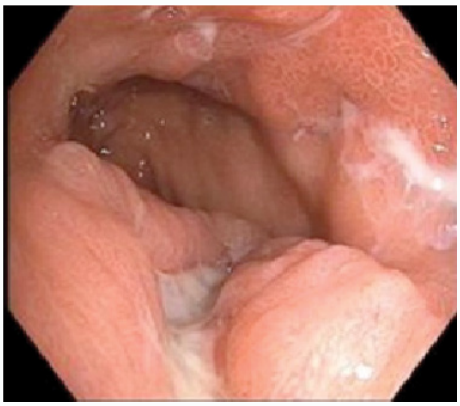

Figure 1: EGD with Large ulcerated friable erythematous and firm mass seen extending from GEJ along lesser curve.

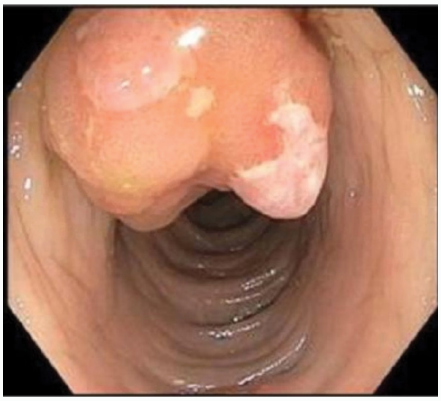

Figure 2: Colonoscopy with large obstructing mass from gastric SRCC.

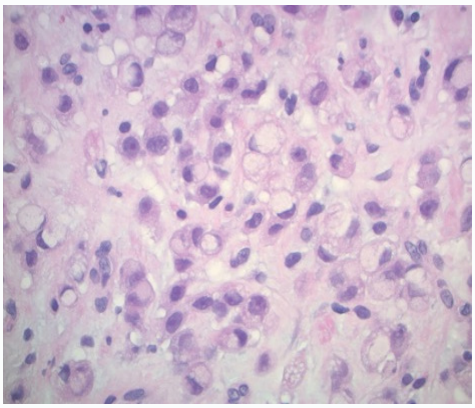

Figure 3: Pathology from colonic mass biopsy demonstrating cells composed of cytoplasmic mucin with eccentrically placed nuclei consistent with SRCC.