

CLINICAL VIGNETTE

A Patient with Rare Metastatic Disease to the Colon

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Case

An 87-year-old man with metastatic non-small cell lung cancer (NSCLC), cardiomyopathy, atrial fibrillation/stroke was admitted with dyspnea and blood per rectum. Hemoglobin was decreased at 6.8g/dL from a prior baseline of 9-10g/dL. Patient was hemodynamically stable. CT showed stable metastatic disease involving the liver, muscles, and bone. New bilateral iliacus and a left lower psoas retroperitoneal hematoma were seen as was large amount of rectal stool with wall thickening consistent with stercoral ulceration. Gastroenterology was consulted and flexible sigmoidoscopy was performed which showed large amount of stool with a large clean based non-bleeding ulcer. He was transfused with stabilization of his hemoglobin and no further bleeding.

A year later the patient was readmitted with diarrhea and lightheadedness and had one blood tinged bowel movement. Hemoglobin again was decreased from ~10g/dL to 6.8g/dL and he was hemodynamically stable. Patient had been started on a new study drug, mocetinostat, but otherwise had no significant clinical changes. CT was performed and no retroperitoneal bleeding nor any other acute finding though new metastatic spread to his left adrenal gland was seen. Sigmoidoscopy was performed and showed black/maroon adherent film. No ulceration was seen but a large part of the mucosa was not visualized. Patient's hemoglobin had responded appropriately to PRBC transfusion but given ongoing black/maroon stool an upper endoscopy and colonoscopy were performed. Patient's upper endoscopy was unremarkable. On colonoscopy a cecal mass and an ascending colon mass were seen and biopsied. Four sub-centimeter polyps were seen in the descending colon and were removed via biopsy forceps and cold snare polypectomy. Pathology of all specimens returned showing poorly differentiated carcinoma mostly within the lamina propria. There was no associated dysplasia in the adjacent/overlying colonic epithelium. Morphologically the cells appeared similar to those seen in the prior right supraclavicular lymph nodes. Given these findings in the setting of known metastatic lung cancer it was determined that his colonic lesions were compatible with metastatic disease from his lung cancer. Patient was transitioned to comfort measures and passed away two months later.

Discussion

Colorectal cancer is the most common gastrointestinal (GI) neoplasia and the third leading causes of cancer death in both

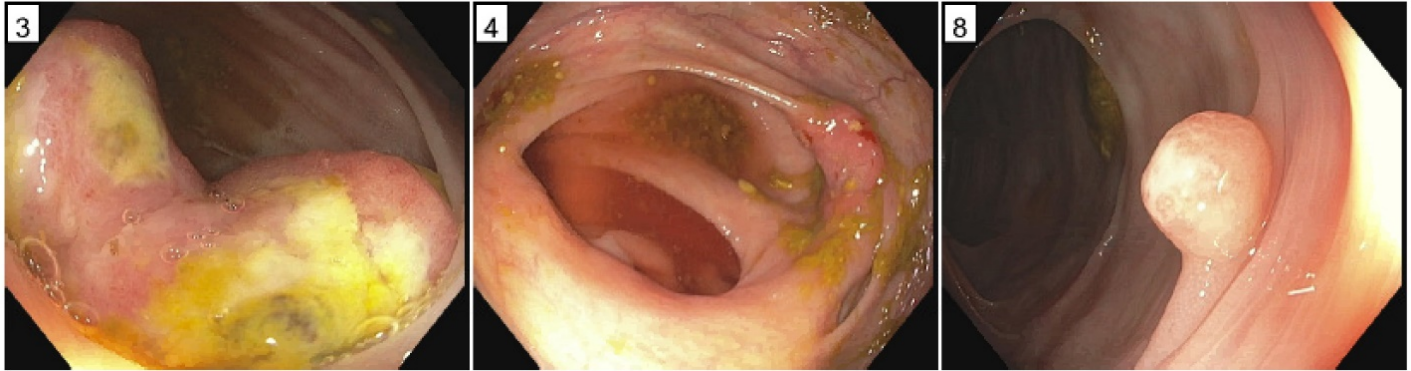
men and women with over 53,000 deaths in the US in 2020.¹ Metastatic lesions to the colon represent ~1% of colorectal cancers.² Pathways for metastatic spread is most commonly from peritoneal seeding but also occurs from hematogenous and lymphatic spread. Patients typically present with bowel obstruction, lower gastrointestinal bleeding, anemia, weight loss; however, many are asymptomatic and metastases are only discovered on autopsy.^{2,3}

Lung cancer is the leading cause of cancer death in men and is the second most common in women after breast cancer. Metastatic lesions most commonly affect the thoracic lymph nodes, liver, adrenal glands, brain, kidney and bones. On an autopsy series of 423 patients over 36 years 14% (58 patients) were found to have metastatic disease to a GI site. The majority of these cases (46%) were due to direct infiltration of the esophagus and less than 6% involved the small bowel and colon.⁴ Histologically squamous cell and large cell lung cancers are most likely to metastasize to the GI tract followed by oat cell, adenocarcinoma, squamo-adenocarcinoma, bronchioloalveolar carcinoma and sarcoma. Lung cancer is generally CK-20 negative and CK-7 positive while colorectal cancer is CK-20 positive and CK-7 negative.²

Other cancers can also metastasize to the colon. Ovarian cancer is the sixth most common malignancy worldwide. Metastatic disease tends to involve the pelvis, peritoneum and omentum but can spread to the sigmoid colon 4-6% of the time either via direct invasion or via the peritoneum (i.e. transcoelomic). Patients may present with abdominal pain, obstruction, intussusception or be asymptomatic. Ovarian cancer is CA-125, estrogen/progesterone, and CK-7 positive while colon cancer is CK-7 negative. Breast cancer is the most common cancer in women worldwide and despite an increase in survival patients are still at risk for distant mets mainly via hematogenous spread. GI metastatic disease occurs in 3-12% of the time and the most common subtype is invasive lobular carcinoma (which accounts from 5-15% of breast neoplasms). Immunostaining shows loss of E-cadherin and over expression of HER-2, CK-7, Ki-67, p54 and CD-68.² Prostate cancer can metastasize to the colon via direct invasion, lymphatic spread and via needle biopsy tract. Renal cell carcinoma can rarely spread to the colon and mainly presents with lower GI bleeding.⁵ Metastatic melanoma affects the GI tract upwards of 60% of the time. Metastases can occur throughout the GI tract but isolated colonic involvement is rare. Patients are generally

asymptomatic but may present with bleeding, obstruction or perforation. Median survival after diagnosis of GI metastases is 4-6 months. Immunohistochemical staining is positive for S-100.⁶

In conclusion, metastatic disease involving the colon is rare but post-mortem data shows a higher than expected incidence. Therefore, clinical suspicion for such spread must be high or else cases may be missed as exemplified by this vignette.



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