When Colon Cancer Crosses Boundaries: Acute Abdomen from Direct Pancreatic Infiltration by a Splenic Flexure Tumor

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INTRODUCTION

- In the United States, colorectal cancer is the third-leading cause of cancer-related deaths in men and the fourth leading cause in women, but it's the second most common cause of cancer deaths for men and women combined (1)
- Locally advanced colon cancer (T4) represents a tumor that penetrates the visceral peritoneum (T4a) and/or invades an adjacent organ (T4b)
- Invasion of adjacent organs occurs in 10-20% of colon cancers (2)
- Tumors arising from the splenic flexure are particularly challenging due to their proximity to the spleen, pancreatic tail, stomach, and abdominal wall

CASE PRESENTATION

- 65-year-old male presented with one week history of generalized weakness, fatigue, and abdominal pain
- On exam, abdomen was soft, moderately distended, and severely tender in the epigastric and periumbilical region
- Laboratory workup showed a hemoglobin of 10.5, white blood cell count of 17, creatinine 4.1, and a lactate of 3.4
- CT scan without contrast demonstrated intra-abdominal free air as well as a splenic abscess measuring approximately 4.5 x 3.2 cm (Figure 1 and 2)
- Patient was taken to the operating room for exploratory laparotomy and was noted to have a ruptured splenic flexure mass with infiltration into the tail of the pancreas. En block resection including extended left hemicolectomy, distal pancreas and spleen. Patient was on pressors and had a temporary abdominal closure.
- On POD 1 his pressor requirements went down and he was taken back to the operating room. Bowel was noted to be healthy and transverse colostomy was created.
- Pathology showed moderately differentiated transmurally invasive adenocarcinoma of the splenic flexure with extension into the pancreas. 1 of 20 lymph nodes were positive (pT4b, pN1a). CEA <5. Oncology was consulted who recommended adjuvant chemotherapy

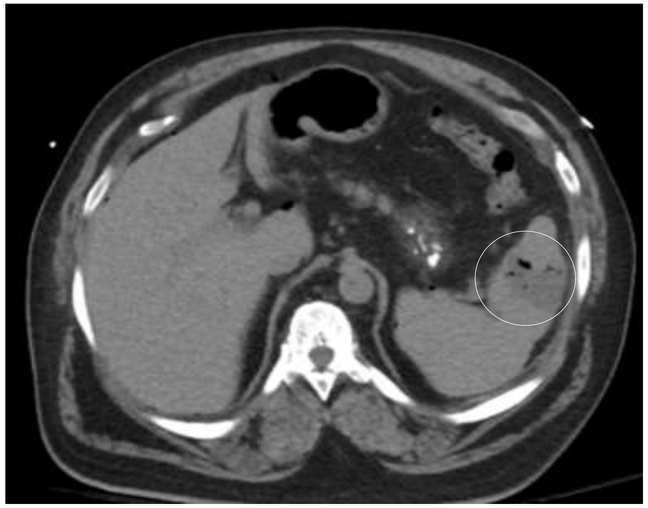

Figure 1: Axial section showing splenic abscess

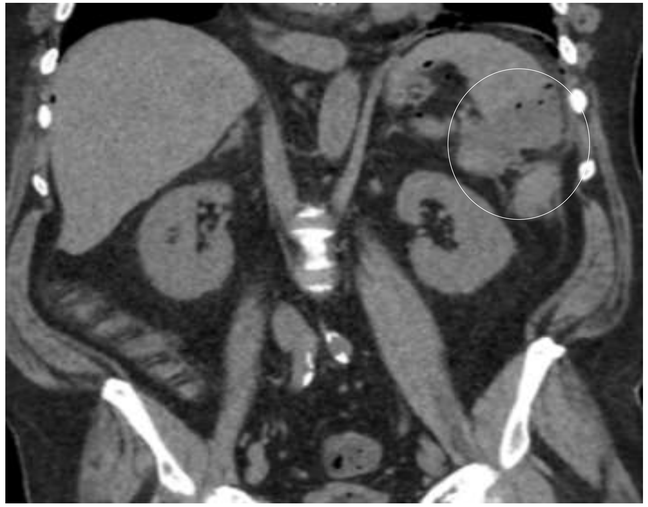

Figure 2: Image showing adherence splenic flexure to the tail of the pancreas and spleen

DISCUSSION

- T4b colon cancer with perforation and splenic abscess formation are an extremely rare clinical presentation, with only 13 documented clinical case reports since 2016 (3)
- Pancreatic invasion in T4b colon cancer is also uncommon, occurring in about 5-15% of multivisceral resections for locally advanced colon cancer (4)
- A Dutch population-based study found that among patients with colon cancer requiring multivisceral resection, the pancreas was one of the less commonly involved organs, with the abdominal wall, small bowel and bladder being the most common (5)
- En bloc pancreatic resection for T4b colon cancer carries significant morbidity rates, with one study showing that 34.4% of cases with multivisceral resections involving the pancreas had major complications (Clavien-Dindo grade III-V) (6)
- Despite the high morbidity, these surgeries have a favorable mortality rate, with 55-66% of patients surviving beyond 5 years post-surgery (7)
- As with all T4b cancers, the largest predictor of survival is lymph node invasion (7)

CONCLUSION

- Multimodal treatment is the standard approach for locally advanced colorectal cancers
- En bloc resection of the involved organs is the standard surgical treatment in achieving long-term survival.

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