A rare case of colon cancer with splenic abscess


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Cancer of the colon does not always present with the familiar symptoms. Perforation and penetration of adjacent organs, with abscess formation as the initial presentation, is uncommon. Splenic abscess is a rare clinical entity. The four causes of a splenic abscess described are: primary pyogenic infection, splenic trauma, hemoglobinopathies and contiguous disease. In this paper, we report a case of splenic abscess from colon cancer in an 50-year-old man who had a left lower chest contusion two weeks before and review pertinent literature. Only 11 reported cases of splenic abscess from colorectal cancer were found in Medline.

KEY WORDS: Colon cancer, Splenic abscess.

Introduction

Colorectal cancers are among the common malignancies. Typical presenting symptoms related to colorectal cancer include rectal bleeding, anemia, change of bowel habits, or abdominal pain. Perforation and penetration of adjacent organs, with abscess formation as the initial presentation, is uncommon. The incidence of colonic perforation ranges from 2.6 to 10%, including cases of free perforation into the peritoneal cavity and those where the tumor has penetrated locally resulting in abscess or fistula formation. Splenic abscess is a rare clinical entity. It generally occurs in patients with neoplasia, immunodeficiency, trauma, metastatic infection, splenic infarct or diabetes. Splenic abscess associated with colon cancer is very rarely reported. We report a case of splenic abscess due to penetration of colon cancer.

Case report

A 50-year-old man was referred to our emergency department with a four-day history of fever, left upper quadrant abdominal pain and left lower chest tenderness. He had a left lower chest contusion two weeks before. Breathing sounds were diminished in the left lower chest. The abdomen was mildly distended with tenderness in the left upper quadrant abdominal. Bowel sound was hypoactive. Laboratory examination showed that the white blood cell count was 18,500. Emergency chest X-rays showed a left basilar pleural effusion. Ultrasonography of the abdomen showed a hypoechogenic area with an unclear margin in the spleen.
Enhanced abdominal CT revealed two intrasplenic low-density collections, containing air (Fig. 1) and a non specific wall thickening of descending colon next to the spleen (Fig. 2).

He developed an episode of severe left upper quadrant abdominal pain twelve hours after admission. A laparotomy performed immediately, showed purulent material in the left subdiaphragmatic region and a splenic flexure mass invading the spleen. There was no hepatic metastases or peritoneal dissemination. The colonic mass was resected en bloc with the spleen. The specimen showed advanced colon cancer penetrating to the spleen. His recovery was uneventful and he was discharged 2 weeks later.

**Discussion**

Approximately one third of patients with colorectal cancer will have major complications, such as involvement of adiacent organs or structures, obstruction, or perforation. Abscess formation occurs in 0.3 to 0.4% of colonic carcinoma and is the second most common complication perforative lesions. Michowits et al. have proposed the following clinical classification of perforation-complicated carcinoma of the colon: 1) free perforation with leakage of the bowel contents into peritoneal cavity; 2) covered perforation with local abscess formation; 3) perforation into one of the neighboring organs or formation of a fistula. Splenic abscess is a rare entity with an incidence ranging from 0.14% to 0.7% in autopsy studies. Splenic abscess occurs mostly in males with average age ranging from 37 to 54 years.

According to Chun’s classification, the four causes of a splenic abscess described are: primary pyogenic infection, splenic trauma, hemoglobinopathies and contiguous disease. In literature metastatic hematogenous infection represents the most common cause of splenic abscess. Endocarditis or another distant site of infection accounted for more than two thirds of all the cases. In our patient, a history of previous chest trauma suggested a secondary infection and suppuration of a contused spleen or of a haematoma arising from injury to splenic tissue. Two weeks is the most common latency period between the trauma and development of the abscess. However, splenic abscess also develops from direct extension of a disease in a contiguous organ, such as a neoplasm of the gastrointestinal tract, a penetrating gastric ulcer, diverticulitis, perinephric abscess, Crohn’s colitis, necrotizing pancreatitis or perihepatic and subphrenic abscess. This group of splenic abscess is still more rare than the traumatic. Splenic abscess is a rare presentation of colon cancer. To the best of our knowledge, only 11 cases have been reported in the literature (Table I). Splenic abscess can occur because of synchronous splenic metastasis with abscess, hematogenous spread to the spleen or direct invasion or local perforation into the spleen, as in our case.

**Table I - Literature review of splenic abscess from colon cancer**

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<tr>
<th>Year</th>
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<tr>
<td>1983</td>
<td>Belinke SA</td>
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<td>2011</td>
<td>Tan TW</td>
<td>Arch Surg</td>
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Such cases often present with atypical clinical findings and are difficult to diagnose. Clinical manifestations of splenic abscess include the triad of fever, left upper quadrant pain and a tender mass. The association with digestive symptoms (bleeding, change of bowel habits or abdominal pain) related to colon cancer is inconstant. The majority of patients have leukocytosis. The chest radiograph is abnormal in 33 to 80 per cent of cases. A left lower lung infiltration or a left pleural effusion are the most common findings. A splenic abscess may rupture into the peritoneal cavity, thus causing acute peritonitis, as in our case. Fever, splenomegaly and localized peritoneal signs indicate perforation of splenic abscess with or without splenectomy. Percutaneous aspiration of splenic abscess can be used as a bridge to surgery for those patients who are critically ill or who have several comorbidities.

Conclusion

Splenic abscess is a rare entity that remains mainly a subject of case reports. Splenic abscess secondary to colon cancer is a very rare clinical entity. In present case, splenic abscess was due to penetration of colon cancer. An appropriate diagnosis was made at an urgent laparotomy for perforation of splenic abscess into the peritoneal cavity.

References