A CASE REPORT

Mesenteric Panniculitis Presenting as Recurrent Small Bowel Obstruction in an Elderly Male

by Ashish Kataria, Sanjaya K. Satapathy, Richard Straus, Silvat Sheikh-Fayyaz, Ronald Greenberg

INTRODUCTION

Sclerosing mesenteritis (SM) is a rare, benign condition that consists of chronic, fibrosing inflammation affecting the mesentery. While usually following an indolent course, the disease may potentially present with significant morbidities and unusually death. While its etiology is unknown, SM mainly affects the mesentery surrounding the small intestine and only rarely the mesentery surrounding the colon. The umbrella term sclerosing mesenteritis includes the acute form called mesenteric panniculitis (MP) (predominated histologically by inflammation of the mesenteric fat) and the chronic form denoted as retractile mesenteritis (RM) (consisting of mainly fibrosis).

The inflammation and fibrosis from sclerosing mesenteritis may cause varied abdominal pathologies giving rise to non-specific presentations and, as such, diagnosis is easily missed and is confirmed only by histology. Patients may present with abdominal pain, intestinal obstruction, fever, chylous ascites, abdominal mass, constipation, gastrointestinal bleeding or diarrhea. There have been rare cases of mesenteric panniculitis presenting as small bowel obstruction.

Because its clinical manifestations are nonspecific and atypical, the preoperative diagnosis of sclerosing mesenteritis can be very difficult to make clinically and requires cooperation between radiologists, surgeons and pathologists. We report a case of an 82-year-old male who presented with recurrent small intestinal obstruction found to have a mesenteric mass that was ultimately diagnosed as sclerosing mesenteritis.

CASE REPORT

An 82-year-old Caucasian male presented to the emergency department with a two-day history of left upper abdominal cramps, vomiting, obstipation and abdominal distension. The patient had a history of recurrent small bowel obstruction over the course of last four years with similar symptoms during each admission. His past medical history was significant for hypertension, diabetes and hyperlipidemia. About four years ago, the patient had an exploratory laparotomy done for small bowel obstruction. There was a dense, fibrotic mass measuring approximately 7 cm by 5 cm fixed to the root of the small intestinal mesentery with matted adhesions of the small bowel. A diagnosis of sclerosing mesenteritis was made. At that time, the mass could not be removed due to significant mesenteric involvement. Biopsy of the mass was taken and lysis of adhesions was performed. Histologically, the biopsy showed fibro-fatty tissue densely infiltrated by chronic inflammation and fat necrosis (Figure 1, 2 and 3). After surgery the patient continued to have recurrent episodes of partial small bowel obstruction during the next four years, each episode being managed conservatively with resolution of symptoms.

(continued on page 58)
During the current admission, his symptoms were more severe and unresolving than previous episodes. His laboratory values were remarkable for hemoconcentration and hypokalemia. Erect and supine radiographs of the abdomen showed several air fluid levels consistent with small bowel obstruction with a transition point in the proximal jejunum. The CT scan (Figure 4) demonstrated a calcified mass along the root of the mesentery with multiple adjacent small lymph nodes and mesenteric fat infiltration, which was essentially unchanged over the last four years. The patient was given intravenous hydration, a nasogastric tube was placed and oral intake was held. The patient failed conservative management and, after 48 hours, exploratory laparotomy was performed. The mass was again biopsied and a gastro-jejunostomy was performed. Post-operatively, the patient continued to have a high gastric output through the nasogastric tube and was kept “npo” for 5 days. A course of intravenous steroids was given without significant resolution of his symptoms. A jejunostomy tube was placed for enteral nutritional support and gastric tube for palliative relief of symptoms related to nausea and vomiting secondary to retention. Furthermore, his post-operative course was complicated with fungemia, gram negative sepsis and a prolonged hospital course. Ultimately, he was discharged to a rehabilitation facility after recovery but was admitted back in the hospital shortly after with recurrent sepsis. He subsequently expired due to multi-organ failure secondary to gram negative sepsis in spite of intensive supportive care.

DISCUSSION

Sclerosing mesenteritis is a rare disease of unknown etiology that is characterized by tumor-like mass composed of chronic nonspecific inflammation, fat necrosis and fibrosis. Although various causes such as infection, trauma or ischemia of the mesentery as well as autoimmune disease have been suggested, the exact etiology of the disease still cannot be determined. Also, many malignancies (including lymphoma, breast cancer, lung cancer, melanoma and colon cancer or other solid malignancies) have been implicated in its pathogenesis. In most cases, sclerosing mesenteritis involves the alvine mesentery, but it can also affect the mesocolon, peripancreatic region, omentum, retroperitoneum, or pelvis.

The mean age group of patients is 50-70 years.
Mesenteric Panniculitis and Small Bowel Obstruction

A CASE REPORT

and men are affected twice as commonly as women. Patients may present with vague abdominal pain, mass, dyspepsia, altered bowel habits, ascites or small bowel obstruction. The symptoms usually result as a result of direct involvement of the bowel by the concurrent inflammation or by adjacent mesentery, vasculitis or ischemia. The mechanism of bowel obstruction is usually adjacent inflammation of the bowel, fibrotic adhesions or direct mechanical compression.

Making the diagnosis of sclerosing mesenteritis is difficult and it is found incidentally in almost half of the reported cases. The diagnosis was rarely made pre-operatively as described in the literature. While the erythrocyte sedimentation rate may be increased in rare cases, extensive biochemical workup may not yield the diagnosis. CT scan may be more beneficial, showing a soft tissue density in the base the mesentery, mass, calcification or cystic changes. Misty mesentery, a subtle attenuation in the mesentery due to chronic inflammation is commonly the only specific CT scan finding. The “Fat ring sign”, an area of fat preservation around the mesenteric fat, may be present and may help to differentiate it from a malignancy.

Definitive diagnosis is histopathologic. Fat necrosis and chronic inflammation can be seen in the early stages and frank fibrosis is noted in the late stages. Often a combination of these is noted [Figs 1, 2 and 3].

The treatment of SM is usually empiric, individualized and has not been standardized. Early stages may regress spontaneously requiring no treatment. Immunosuppressive therapy such as azathioprine, steroids and colchicine have shown promising results in some studies but need further research.

Surgery and radiation therapy have also been used for symptomatic relief. As discussed above, intestinal obstruction that remains unresolved with conservative management, partial resection, bypass or colostomy may be necessary. In a recently published study, complete or partial resection of the mesenteric mass with adherent small bowel was possible in only one-third of the patients who underwent surgery and could be a curative option and should be considered when appropriate.

References


Figure 1: CT scan of the abdomen showing bowel obstruction. Figure 2: Sagittal CT scan demonstrates a solid soft-tissue mass which was related to small bowel mesentery (white arrow). Figure 3: Coronal CT scan shows the mass relationship with the small bowel. Figure 4: Sagittal CT scan demonstrates a solid soft-tissue mass which was related to small bowel mesentery (white arrow).