

Mesenteric Panniculitis: A Case Report and Review of the Literature

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ABSTRACT

Mesenteric panniculitis is a benign disease characterized chronic nonspecific inflammation of the mesentery adipose tissue of the small intestine and colon. The specific etiology of the disease is unknown. The diagnosis is suggested by computed tomography (CT) and is usually confirmed by surgical biopsies. In recent years, abdominal CT is used as an effective method for diagnostic evaluation.

We reported a case of the mesenteric panniculitis diagnosed with CT and operated for acute pancreatitis and cholecystitis five years ago.

INTRODUCTION

Mesenteric panniculitis (MP) is an acute and chronic fibrosing inflammatory disease that affects the adipose tissue of the mesentery of the small intestine (1). The specific etiology of the disease are as yet unclear. Mesenteric panniculitis has been connected to a variety of conditions like vasculitis, granulomatous disease, malignancies and pancreatitis (2).

Clinical manifestations are nonspecific and atypical. The disease is often asymptomatic. The most common clinical presentations include abdominal pain, vomiting, diarrhea,

constipation and palpable abdominal mass or intestinal obstruction. The prognosis is good in most patients and the outcome of the disease is usually benign.

Laboratory parameters are usually normal; however, an increased erythrocyte sedimentation rate has been noted (3).

Abdominal CT is the most sensitive imaging modality for detecting MP, but the definite diagnosis of mesenteric panniculitis is established by biopsy (4-5).

The objective of this case report is to present the patient with mesenteric panniculitis developing five years after the operation for acute cholecystitis and acute pancreatitis. □

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CASE REPORT

A 59-year-old woman was admitted to our hospital with 2 months history of chronic abdominal pain, nausea and vomiting. The abdominal pain, mainly localized in the upper quadrant, were intermittent and mild. Her past medical history included abdominal operation for cholecystitis and pancreatitis five years ago. She had no known allergies.

On initial physical examination was remarkable upper quadrant tenderness with voluntary guarding. The laboratory profile of routine blood test, renal and hepatic function tests were normal. Blood cultures, the anti-HIV test were negative, and the chest x-ray showed no abnormalities. Tumor markers were normal. Abdominal USG was unremarkable except for an atrophic pancreas. Abdominal pain continued during hospitalization. Therefore, computed tomography (CT) of the abdomen was performed using reconstructed slice thickness of 5 mm after oral and intravenous contrast administration.

CT findings well defined mass arising from mesentery fatty tissue, surrounded by a sheath-like stripe and accompanied by multiple lymph nodes. Pancreas was atrophic (Figure 1).

In the present case, the CT findings provided information about the diagnosis, the radiological imagines were highly suggestive of mesenteric panniculitis (Figure 2, 3). Therefore, biopsy was not performed for diagnosis. □



FIGURE 1. Contrast-enhanced CT scan shows mesenteric panniculitis as well-circumscribed, inhomogeneous fatty mass (arrow) displaying higher attenuation than normal retroperitoneal fat.



FIGURE 2. 3D Coronal CT scan shows mesenteric vessels surrounded by mesenteric panniculitis.



FIGURE 3. 3D Sagittal CT scan shows mesenteric vessels surrounded by mesenteric panniculitis.

DISCUSSION

Mesenteric panniculitis is a chronic and nonspecific inflammation of the adipose tissue of the intestinal mesentery. In over 90% of cases, mesenteric panniculitis involves the small-bowel mesentery, a rare of colon mesentery (6). Mesenteric panniculitis is a rare condition. There is no clear information about the incidence of mesenteric panniculitis in the literature. Daskalogiannaki et al. screened a number of 7620 patients with CT and they identified 0.6% the incidence of mesenteric panniculitis (7).

Mesenteric panniculitis occurs independently or in association with other disorders remains unknown but may be associated with some diseases. The disease has been associated to a variety of conditions such as vasculitis, granulomatous disease, autoimmune disorder, rheumatic disease, malignancies, pancreatitis, hypersensitivity reactions, ischemia, even bacterial infection and abdominal trauma or surgery (7-8). Emory et al. have reported a series in which 84% of patients had a history of abdominal trauma or surgery as in our case (4).

The exact diagnosis is made by looking at the three pathologic finding: fibrosis, chronic inflammation, fatty infiltration of the mesentery (9).

These three components can be found in various proportions. If fibrosis is dominant, as retractile mesenteritis; if mesenteric inflammation is dominant, it is called mesenteric panniculitis. To some extent, all three components are present in most cases (10).

Mesenteric panniculitis is usually asymptomatic and often incidental. When symptomatic, patients may present with abdominal tenderness or a palpable abdominal mass and systemic manifestations including abdominal pain, pyrexia, weight loss and bowel disturbance of variable duration. Symptoms may be progressive, intermittent, or absent. Laboratory findings are usually nonspecific, but including elevation in erythrocyte sedimentation rate, neutrophilia and anemia (4,11). The mean clinical progression is from 2 wk to 16 years (1). Our case was admitted with nonspecific complaints to our hospital, and was diagnosed 5 years after surgery.

The differential diagnosis of mesenteric panniculitis is broad and has been associated with a number of malignant diseases such as lymphoma, lung cancer, melanoma, colon can-

cer, renal cell cancer, myeloma, gastric carcinoma, chronic lymphocytic leukemia, Hodgkin's disease, large cell lymphoma (giant-cell carcinoma), carcinoid tumor, and thoracic mesothelioma (4,7,8,12,13).

CT features of the disease are considered somewhat specific for this disorder: a "fat ring sign" that reflects the preservation of fat around the mesenteric vessels, a solitary well-defined mass composed of inhomogeneous fatty tissue with attenuation values higher than those of the retroperitoneal fat at the root of the small-bowel mesentery, no evidence of invasion of the adjacent small-bowel loops even if displaced, mesenteric lymphadenopathy and the presence of a "tumoral pseudocapsule," which is detected in 50% of patients (7,14). In our case, except a "fat ring sign" appearance, all results are available.

A definitive diagnosis is biopsy but open biopsy is not always necessary for diagnosis. Recently mesenteric panniculitis has been diagnosed using CT features of the disease (4,5,15).

Mesenteric panniculitis resolves spontaneously, however, treatment has been reserved for symptomatic cases. Some drugs are useful to medical treatment such as steroids, thalidomide, cyclophosphamide, progesterone, colchicine, azathioprine, tamoxifen, antibiotics and emetine. Surgical resection is sometimes attempted for definitive therapy and in cases of intestinal obstruction and other complications, such as ischemia (15-18). Our case was started on oral corticosteroid treatment with excellent response.

As a result, mesenteric panniculitis is a slowly progressive, benign and chronic fibrous inflammatory disease that affects the adipose tissue of the mesentery. The diagnosis can be made by CT without biopsy. CT findings are considered specific for this disorder.

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