Idiopathic Isolated Omental Panniculitis Confirmed by Percutaneous CT-Guided Biopsy

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The preoperative diagnosis of intraabdominal panniculitis is difficult due to its rarity. However, the increased use of abdominal computed tomography (CT) for a variety of indications has increased the diagnosis of intraabdominal panniculitis, including omental panniculitis. The characteristic CT features of intraabdominal panniculitis are increased attenuation of the adipose tissue, the fat-ring sign, a tumoral pseudocapsule, soft-tissue nodules, and a left-sided orientation of mass maximum transverse diameter. Recognition of these features is valuable in the diagnosis of panniculitis, and hence percutaneous CT-guided biopsy to determine their presence may prevent unwarranted surgery. We report the case of a 61-year-old man found to have an idiopathic isolated omental panniculitis that was diagnosed by abdominal CT and percutaneous CT-guided biopsy. (Gut and Liver 2009; 3:321-324)

Key Words: Panniculitis; Peritoneal; Tomography, X-ray computed

INTRODUCTION

Dystrophic and aseptic inflammatory disease of intraabdominal adipose tissue is a rare entity.1,2 This disorder mainly involves the mesentery of the small bowel, especially at its root, and occasionally the mesocolon; however, it can also occur at any other sites in the abdomen, including the pelvis, the peripancreatic area, and the omentum.3 Isolated omental panniculitis means the intraabdominal panniculitis that has no evidence of pancreatitis, inflammatory bowel disease, or extraabdominal fat necrosis, and involves the omentum only.1,4 There are only three cases of intraabdominal panniculitis with isolated omental involvement that have been reported in the medical literature; these prior cases were diagnosed by the exploratory laparotomy.1,4,5 We report a case of isolated omental panniculitis diagnosed by abdominal computed tomography (CT) and confirmed by percutaneous CT-guided biopsy.

CASE REPORT

A 61-year-old man presented with a one week history of left upper quadrant noncramping pain and nausea. Ultrasonography on his abdomen which was performed at another hospital revealed two hyperechoic masses in left upper quadrant area around the splenic flexure of the colon and the possibility of colonic mass was suggested. The medical history was unremarkable except diabetes mellitus. The physical examination showed a low grade fever (37.5°C) and tenderness at the left upper quadrant of the abdomen. There was no palpable mass in his abdomen. Laboratory testing revealed a mild leukocytosis (11,100/mm³), elevated fasting serum glucose (142 mg/dL), elevated ESR (47 mm/h), elevated high sensitivity CRP (10.19 mg/dL), and normal amylase (50 IU/L). The colonoscopy was unremarkable. CT of the abdomen showed two soft tissue masses (4.4×3.1 cm and 3.1×2.2 cm) in the omentum around the transverse colon (Fig. 1). The attenuation of the masses was higher than that of the surrounding fat tissue. The fat-ring sign and a tumoral pseudocapsule were observed. The pancreas appeared normal. The diagnosis of isolated omental panniculitis was suggested. We performed a percutaneous CT-guided...
biopsy instead of a surgical biopsy based on the CT findings which was highly suggestive of a benign condition. The histology revealed aggregates of foamy macrophages and chronic inflammatory process including plasma cells and lymphocytes (Fig. 2A). Fibrosis was also seen (Fig. 2B). The diagnosis of isolated omental panniculitis was made according to the clinical symptom, the CT finding and the histology, and the patient was treated with low dosage of prednisolone. Three weeks later, the abdominal pain had completely resolved. A follow-up CT scan two months later showed the regression of the two omental masses (2×1 cm and 0.5×0.5 cm) (Fig. 3). The patient continued to be well, and completely asymptomatic for 6 months follow-up.

**DISCUSSION**

The following criteria are considered necessary for the diagnosis of intraabdominal (mainly mesenteric) panniculitis: (i) diffuse, single, or multiple masslike fatty lesions in the mesentery, retroperitoneum, omentum, and/or pelvis; (ii) histological confirmation of fat necrosis with inflammatory infiltrates and/or infiltration with foamy lipid-laden macrophages; and (iii) no evidence of pan-