Mesenteric panniculitis of the sigmoid colon

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ABSTRACT

A 44-year-old women presented with abdominal pain, diarrhea and lower abdominal mass. CT findings were not characteristic, and exploratory laparotomy revealed a mass involving the sigmoid colon with gross appearance simulating malignancy. Histological examination of the resected sigmoid colon revealed Mesenteric Panniculitis. Post-operatively, her symptoms dramatically improved. Having reviewed the literature, this appears to be the first reported case among the Saudi population.

Keywords: Mesenteric panniculitis.


Mesenteric Panniculitis, which is an inflammatory process of the mesenteric fat, is an uncommon condition with unknown etiology. Colonic involvement is less frequent than that of the small intestine. This disease occurs in late adult life, with no gender or racial predominance. This article presents a case of mesenteric panniculitis localized to sigmoid colon.

Case Report. A 44 year-old Saudi women was admitted to Riyadh Military Hospital with a one month history of abdominal pain, diarrhea and lower abdominal mass. She had a past history of small bowel resection for mesenteric vein thrombosis and cholecystectomy for cholelithiasis 4 years ago. On presentation she was still on contraceptives and off anticoagulants for the last 3 years. On examination she was not in pain, or distressed. Her cardiovascular and respiratory systems were essentially normal. Abdominal examination revealed the scar of previous laparotomy, and an ill-defined mass in the lower abdomen with mild tenderness on deep palpation. Initial laboratory investigations, including full blood count, urea and serum electrolytes, liver function tests, prothrombin time, partial thromboplastin time, INR, stool analysis and culture, were all within normal limits. Computerized tomography (CT) scan of the abdomen (Figure 1) showed apparent wall thickening and slight dilatation of a segment of bowel loop centrally located in the lower abdomen and upper pelvis with localized thickening of the mesentery, but could not define which bowel, small or large as the origin of this lesion. The argument was in favor of small bowel pathology, and subsequent small bowel enema (Figure 2) revealed dilatation of the jejunal loop proximal to previous bowel anastomosis with thickening of the mucosal fold. According to these findings, the provisional diagnosis was gastroenteritis secondary to bacterial overgrowth syndrome which is due to partial bowel obstruction caused by either stricture or adhesions. The patient was then started on non-absorbable oral antibiotics (neomycin) for 7 days but with no improvement. In addition, she had one episode of bleeding per rectum. Because of this, and the past history of bowel...
Figure 1 - CT scan of the abdomen.

Figure 2 - Small bowel enema.

Figure 3 - Histology of the sigmoid mesocolon (HE x 200).

Figure 4 - Histology of the sigmoid mesocolon (HE x 400).

Discussion. Mesenteric panniculitis, described first by Odgen et al. is a rare non-neoplastic condition, with unknown etiology, which is characterized by an abnormal inflammatory reaction and mesenteric fat necrosis. Other terms that have been used include, mesenteric lipodystrophy, retractile mesenteritis, and sclerosing mesenteritis. These are probably histological variants rather than different clinical entities. Having reviewed the literature, this appears to be the first reported case among the Saudi population.

Mesenteric panniculitis occurs mainly in late adult life, with no gender or racial predominance, except in the mesenteric panniculitis of the mesocolon which has a male predominance. Abdominal pain, diarrhea or constipation, and lower abdominal mass are the most frequent symptoms. High fever and leucocytosis are uncommon. The exact etiology is unknown, but autoimmunity, infection, trauma or surgery may be predisposing factors. The small bowel mesentery is the common site of involvement with formation of a single mass, multiple masses, or diffuse mesenteric thickening. Next is the mesocolonic involvement, which is usually, more progressive and advanced. Other sites of
involvement include, the mesoappendix, and the omentum. Grossly, the mesentery is massively thickened and rubbery, with irregular areas of reddish-brown to pale yellow foci resembling fat necrosis scattered all over. Microscopically, degeneration of the adipose tissue, revealed by aggregates of lipid-laden macrophages (Lipophages) is diagnostic. Clinically, the diagnosis is often difficult, because the presentation and radiological findings are usually nonspecific. Barium enema may reveal colonic narrowing, shortening and poor extensibility, in the case of mesocolon lesions. Ultrasound of the abdomen and angiography of the visceral vessels are nonspecific. Recently CT has proved to be helpful in the diagnosis of this disease. The findings of a well-defined mass with fatty and soft-tissue densities, surrounding but not involving the mesenteric vessels on the CT scan, are characteristic.

Lymphoma and mesenteric metastases should be considered the most frequent clinical, radiological, and surgical differential diagnosis. The only method of definitive diagnosis of mesenteric panniculitis is laparoscopy or laparotomy to gain tissues for histological confirmation of fat necrosis and inflammatory infiltration with lipid-laden macrophages. Gross diagnosis may not be difficult. Ogden et al stated that 'The gross appearance of the involved mesentery is at first confusing but once seen, the picture is not easily forgotten and gross diagnosis is not difficult the second time'. There is no specific treatment for mesenteric panniculitis, some advocate the use of steroids, radiation, antibiotics and azathioprine. The overall prognosis for mesenteric panniculitis is good, and the disease process is usually self-limiting. The surgical approach should, therefore, be limited to exploration with biopsy and colostomy or bypass surgery when deemed necessary.

In summary, we report a case of mesenteric panniculitis in which the diagnosis was made only after surgery. In fact, this was the case in most of the previously reported cases of mesenteric panniculitis. This is because the presentation and radiological findings are, usually, nonspecific. We conclude that mesenteric panniculitis should be included in the differential diagnosis for any patient presenting with abdominal pain associated with diarrhea or constipation and specially when found to have an abdominal mass.

References