

## Mimicker of Renal Colic: Mesenteric Panniculitis

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### ABSTRACT

A Mesenteric panniculitis is an uncommon disorder with unknown etiology. It may cause nonspecific abdominal or systemic symptoms. Radiological modalities especially computed tomography are very helpful to make a diagnosis. Hence, the radiologist should be familiar with its tomographic findings to avoid further examinations and unnecessary surgery. We report computed tomography findings of mesenteric panniculitis in an adult patient with renal colic.

**Keywords:** Computed tomography; mesenteric panniculitis; renal colic.

### INTRODUCTION

Mesenteric panniculitis is an uncommon disease due to chronic non-specific inflammation at the adipose tissue of the bowel mesentery. The etiology of the disease remains unclear. It is seen mostly between the 6<sup>th</sup> and 7<sup>th</sup> decades of life and shows mild male predominance. Although, the patients are usually asymptomatic, in a small group it may cause abdominal or systemic symptoms.<sup>1</sup> Radiological investigations especially computed tomography are very helpful to make a diagnosis. We report computed tomography findings of mesenteric panniculitis in an adult patient with renal colic.

### CASE REPORT

Fifty Five years old man was admitted to emergency department with left upper quadrant pain like renal colic for 3 days. He had a history of left renal calculi and had treated 4 years ago. Physical examination was unremarkable except for mild discomfort in the left upper quadrant. Abdominal sonography was performed, but revealed no abnormality. Then, unenhanced abdominal CT examination for evaluating renal calculi was obtained. Axial unenhanced CT images (fig1)

showed inhomogenous mesenteric fatty lesion (yellow arrows) with ground glass opacity (misty mesentery). The lesion displayed higher attenuation than normal peritoneal fat tissue. It extended mesenteric root toward left upper quadrant with surrounding small mesenteric vessels (fig 1). Also, multiple small mesenteric lymph nodes were found (fig 1-red arrows). Coronal CT image (fig 2) demonstrated well-circumscribed, inhomogenous fatty mass at the root of small bowel mesentery. There was no sign of renal calculus. Together, these clinical and radiological signs were highly suggestive of mesenteric panniculitis. Due to no other abnormality on CT examination, medical treatment was started for mesenteric panniculitis and the patient was discharged home. He had a relief of abdominal pain on the follow-up examination after a few weeks.

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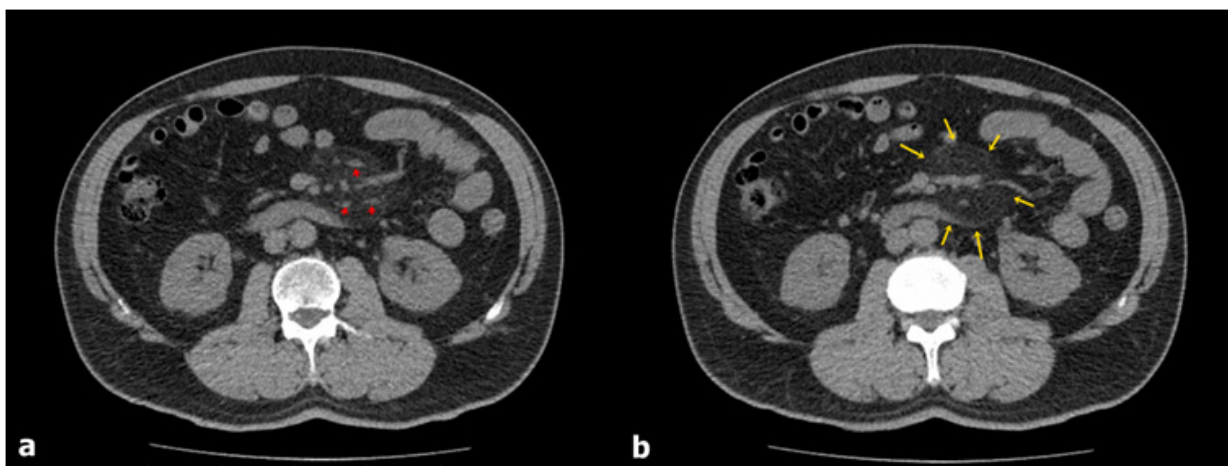


Figure 1. Axial unenhanced images (a and b) of left upper quadrant demonstrated inhomogenous hyperdense mesenteric fatty lesion (yellow arrows) with misty mesentery and multiple small lymph nodes (red arrows).

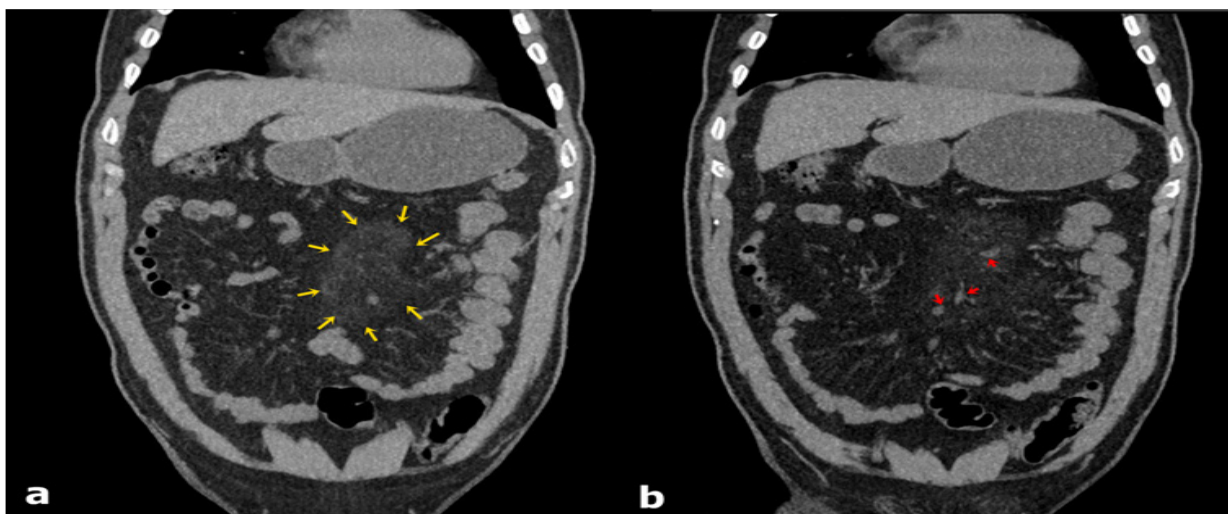


Figure 2. Coronal unenhanced images (a and b) of abdomen revealed well-circumscribed, inhomogenous fatty mass (yellow arrows) at the root of small bowel mesentery surrounding small mesenteric vessels (red arrows).

## DISCUSSION

Despite the disease occurs independently, the association with inflammatory disorders such as pancreatitis, granulomatous disease, vasculitis, rheumatic disease, and malignancies has been described.<sup>2,3</sup>In a previous study 69.3% of patients with mesenteric panniculitis had a malignancy, mostly urogenital or gastrointestinal adenocarcinomas or lymphomas.<sup>4</sup>

The disease is often asymptomatic (30-50% of cases), and in the literature the rate of incidental detection of mesenteric panniculitis has been reported to be

approximately 92%.<sup>2,4</sup>Besides, the patients may present with nonspecific abdominal pain, weight loss, bowel discomfort and also an abdominal mass. Laboratory findings and physical examination shows no abnormalities or nonspecific results.<sup>4</sup>

Abdominal CT examination is an effective method for the diagnosis. CT findings include well-demarcated or ill-defined mesenteric masslike lesion with ground glass opacity which is called misty mesentery. Also, a fat halo surrounding the mesenteric vessels and soft tissue nodules referred as fat ring sign may be detected.<sup>4</sup> US may be helpful in the diagnosis and may demonstrate

similar findings to CT. But mostly no abnormalities could be found<sup>5</sup>. In our patient, CT is efficient for establishing the diagnosis with specific findings.

The definite diagnosis of the disease is made by histologic examination which reveals lipid-laden macrophages, lymphocytic aggregates and lymphoid follicles and also variable amounts of fibrosis. According to predominant histological findings, the disease has been categorized into three groups such as mesenteric lipodystrophy, mesenteric panniculitis or sclerosing mesenteritis, respectively.<sup>6</sup>With the advent of imaging technology, the highly suggestive radiological findings of the disease, have recently been described in the literature. Therefore, open biopsy for histopathological diagnosis is rarely necessary. In the reported studies, small groups of patients had histopathological investigation, the diagnosis of mesenteric panniculitis was mostly based on the radiological and clinical findings<sup>2,4</sup>. Similar to previous reports, we did not have histopathological examination. The diagnosis of the disease in our patient was made due to radiological features.

The main treatment of the disease is medical and supportive because of its self limiting nature. Also, complete resection of the mesenteric panniculitis is usually impossible so surgery is thought to be unnecessary.<sup>7</sup>

The differential diagnosis includes many disorders which may affect the mesentery such as lymphoma, mesenteric lipoma, well-differentiated liposarcoma, peritoneal carcinomatosis, and inflammatory disease of adjacent structures (diverticulitis, pancreatitis).<sup>8</sup>

## CONCLUSIONS

Mesenteric panniculitis is a rare disease and should be considered in the differential diagnosis of patients with nonspecific abdominal symptoms of unknown etiology. It is a self limiting disorder and the response to medical treatment is very well. Hence, the radiologist should be aware of this disorder and should be familiar to its CT findings to avoid misdiagnosis and unnecessary surgery.

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