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Mesenteric panniculitis: Imaging is the key

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Abstract

Mesenteric panniculitis is a rare disease, characterized by the association to a variable degree of inflammation, necrosis and sclerosis. It is characterized by a thickening and shortening of the mesentery. The pathophysiology remains debated with a poor and non-specific clinic. The diagnosis can be evoked by CT scan. Medical treatment, when indicated, is based on anti-inflammatory and immunosuppressive drugs, while surgery is reserved for the treatment of complications.

Keywords: Mesenteric panniculitis; Diagnosis; Imaging.

Clinical image description

Mesenteric Panniculitis (MP) is an inflammatory disease of the mesentery [1]. It is often discovered incidentally during a radiological examination. It mainly affects adults. Its etiopathogenesis remains poorly understood [2]. The hypothesis of an inflammatory reaction of the mesentery in response to a pre-existing or co-existing pathology is the most evoked [2].

It is asymptomatic in almost half of the cases. Generally, patients report abdominal pain, a mass or an occlusive syndrome [1]. Transit disorders, ascites, intestinal perforation or obstructive digestive and/or vascular syndromes have been described [2].

Radio logically, the injected CT scan allows a positive diagnosis. Indeed, when the inflammatory component predominates, the appearance is that of a hyper dense mesentery with small nodular lesions without individualizable tissue mass (misty mesentery). Usually, the MP appears as one or more heterogeneous, well-limited tissue masses surrounded by a hypo dense halo, containing patches of fat density, hyper dense relative to surrounding fat, and areas of tissue or fluid density arranged in thin trabeculae corresponding to necrosis, fibrosis or vessels. A discontinuous and hyper dense pseudo capsule is reported in half of the cases. The persistence of a hypo dense fatty halo around the mesenteric vessels (fat ring sign) indicates the absence of vascular invasion. The intestinal tracts are often compressed but without parietal abnormalities, except in cases of vascular compression [3]. Magnetic Resonance Imaging (MRI), always as a second-line procedure. The appearance of the lesions varies according to the intensity of the inflammatory component. Usually, one or more intermediate signal masses are found in T1, slightly hyper intense in T2, with variable enhancement after injection of gadolinium. The existence of a hypointense peri-injury and perivascular halo in T1 and T2 is possible (fat ring sign) [2].

In case of doubt about the diagnosis, confirmation by biopsy is necessary to eliminate differential diagnoses, especially lymphoma, well-differentiated liposarcoma, mesenteric lipodystrophy, retractile mesenteritis and peritoneal carcinosis [2].

Treatment is based on the use of immunosuppressants, anti-inflammatory drugs or corticosteroid therapy, alone or in combination. Surgery is only indicated in case of obstructive complications [2].

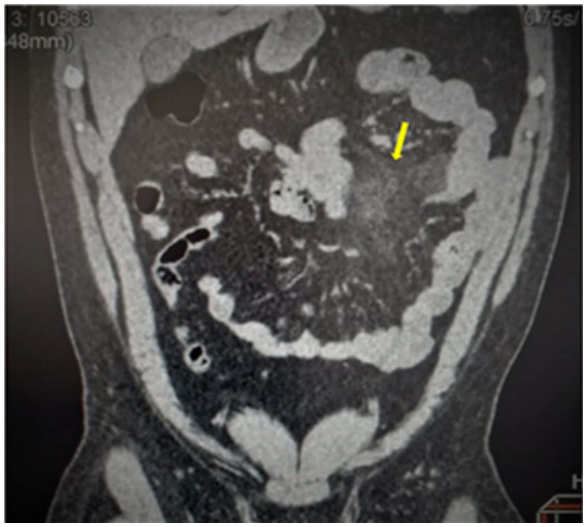

Figure 1: Abdominal CT scan with contrast injection in coronal section showing a localized area of mesenteric fatty over density, without individualizable tissue mass (misty mesentery).

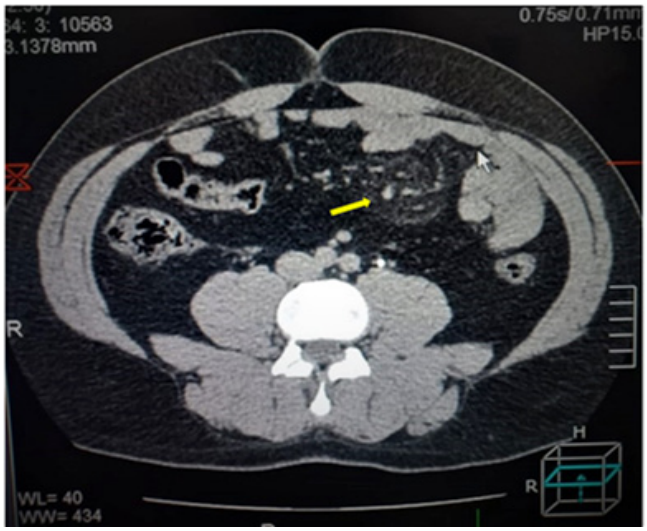

Figure 2: Abdominal CT scan with contrast injection in axial section showing mesenteric fat overdensity with the presence of a hypodense fat halo around the mesenteric vessels (fat ring sign).

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