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Image Article

Septic Thrombosis of The Superior Mesenteric Vein Secondary to Acute Appendicitis

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Clinical Case

We present a 43-year-old male patient with a history of Steinert's disease, smoking 15 cigarettes/day, dyslipidemia on treatment with ezetimibe, and myopericarditis at 30 years of age. He denies a personal or family history of thrombosis. He went to the emergency room due to abdominal pain of a week's duration associated with a poor general condition that had worsened in the last few hours. On physical examination, he is hemodynamically stable and presents with generalized abdominal pain with defense in the epigastrium and peritoneal irritation. Laboratory analysis highlights leukocytes 9.5 K/µL, neutrophils (percentage) 77.1%, fibrinogen 952 mg/d L, C-reactive protein 95 mg/L. A contrast-enhanced tomography of the abdomen was performed, reporting extensive thrombosis of the superior mesenteric vein 6 centimeters in length and a 10-mm thickened appendix with a discrete amount of free intra-abdominal fluid (Figure 1). It was decided to perform an urgent laparoscopic exploration in which congestion of a long length of intestinal loops was evidenced without appreciating signs of ischemia, in addition to phlegmonous appendicitis in which a regulated appendectomy was performed. The postoperative period was uneventful, starting the day after surgery with anticoagulation with subcutaneous bemiparin 10,000 U and he was discharged on the third day with the same dose of heparin for one month and amoxicillin 875 mg/clavulanate 125 mg for two weeks. A follow-up CT angiography was performed a month later (Figures 2,3) which revealed chronic thrombosis of the superior mesenteric vein with permeability of distal branches through collaterals. He is asymptomatic and is being monitored in an outpatient hematology clinic.

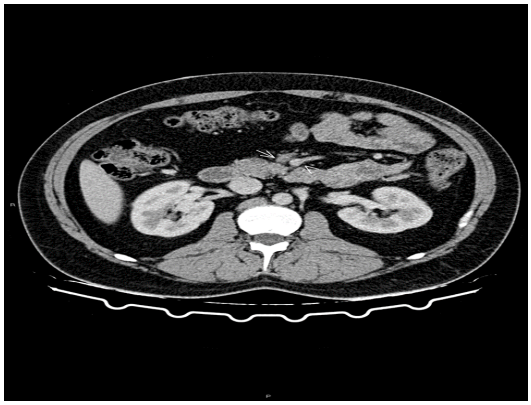

Figure 1: Axial abdominal-pelvic CT image with i.v. contrast. in portal phase. He identifies a branch belonging to thrombosed VMS (Arrow). adjacent is displayed AMS branchof normal morphology (arrowhead).

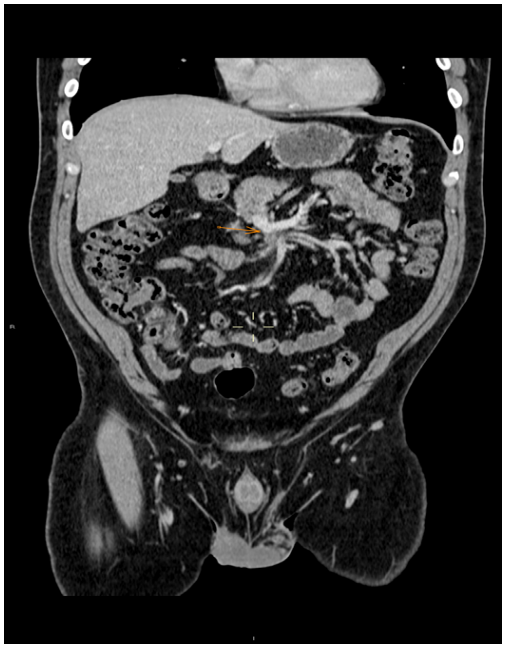

Figure 2: Oblique coronal abdominal-pelvic CT image with i.v. contrast. in phase portal. A branch thrombosis belonging to VMS (Arrow) can be seen, appreciating the patent porto-splenic confluence.

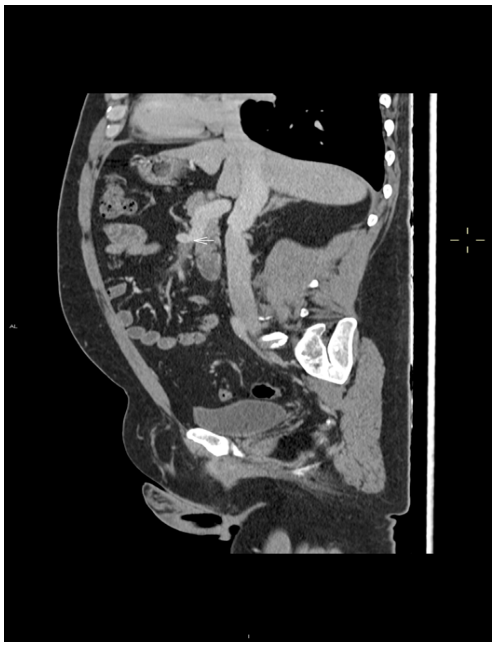

Figure 3: Oblique sagittal abdominal-pelvic CT image with i.v. contrast. in phase portal. There is a thrombosis of distal branches belonging to VMS (Arrow).

Discussion

The complications of acute appendicitis have been widely described in the literature; mesenteric venous thrombosis is a rare manifestation of this pathology corresponding to less than 1% frequency [1,2]. Published studies make it responsible for liver abscesses and up to 10% of cases of mesenteric ischemia [3,4]. The main predisposing factor is hypercoagulability factors, so they must be suspected when there are risk factors [4]. In the clinical case that we present, in addition to smoking and dyslipidemia, the patient suffers from Steinert's disease. It is a genetic disease characterized by myotonic dystrophy and is associated with a higher incidence of thromboembolic disease [5]. The clinical presentation is not very specific: insidious picture of abdominal pain, associated with poor general condition, nausea, or a febrile syndrome. All this causes a delay in the diagnosis, increasing the probability of progress towards a septic condition, as well as towards a possible mesenteric ischemia. The analysis is not specific either, although elevation of acute phase markers and fibrinogen is usually manifested. The best imaging test for the diagnosis of venous thrombosis in the portal mesenteric system is CT with IV contrast.

If there is an indication for surgery, either due to the presence of appendicitis or if there is a doubt of ischemia, the laparoscopic approach is recommended because it allows a complete abdominal exploration to be performed at the same time as the appendectomy, being associated with a better recovery and less admission days. The most accepted treatment is broad-spectrum antibiotic therapy covering both aerobic and anaerobic germs for at least 14 days to prevent the appearance of liver abscesses, as well as anticoagulation if there are risk factors for hypercoagulability or if the thrombosis is extensive with complete venous occlusion [6].

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