

Infective Suppurative Thrombosis in the Left Portal Vein After Acute Appendicitis

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1. Clinical Case

Postoperative complications can occur. Most of them are frequent and we are used to dealing with them, but there are others that seem to appear only in a few posts, and when they happen to your patient you cannot explain why.

In our case, it is a young patient with no relevant medical history

except for taking oral contraceptives. She attended the Emergency Department presenting pain in the right iliac fossa over the last 24 hours. She was diagnosed with incipient acute appendicitis without sepsis criteria and an emergency intervention with laparoscopic approach was performed without incident. Due to her good evolution, she was discharged home after 24 hours with oral antibiotics and antithrombotic prophylaxis (Figure 1).



Figure 1: Axial CT image. Diagnosis of pylephlebitis with hepatic hypoperfusion.

She returned to the Emergency Department 48 hours after surgery, complaining of sudden moderate intensity pain in the right upper quadrant without any other digestive symptoms or fever. In the blood test there was a normal leukocyte count and neutropenia along with alteration of liver enzymes with serum bilirubin in the normal range. Due to the recent surgical intervention, an urgent abdominal

CT scan is performed in which a left portal vein thrombosis (pylethrombosis) was observed associated with a perfusion disorder in segment II of the liver. An *Escherichia Coli* in bloodstream was isolated. Also, a coagulation study was performed without pathological findings (Figure 2).



Figure 2: Coronal CT image. Diagnosis of acute appendicitis. Hepatic parenchyma without pathological findings.

With a high radiological suspicion of pylephlebitis, broad-spectrum intravenous antibiotic therapy with ciprofloxacin (400 mg every 12 hours) and metronidazole (500 mg every 8 hours) was started while waiting for the blood culture. Anticoagulation is associated as pre-

vention of thrombus extension and its sequelae. Intravenous treatment was maintained until a clinical and radiological response was observed on the tenth day. The remaining antibiotic course was completed with oral agents, in the same regimen until completing 6 weeks of treatment (Figure 3).

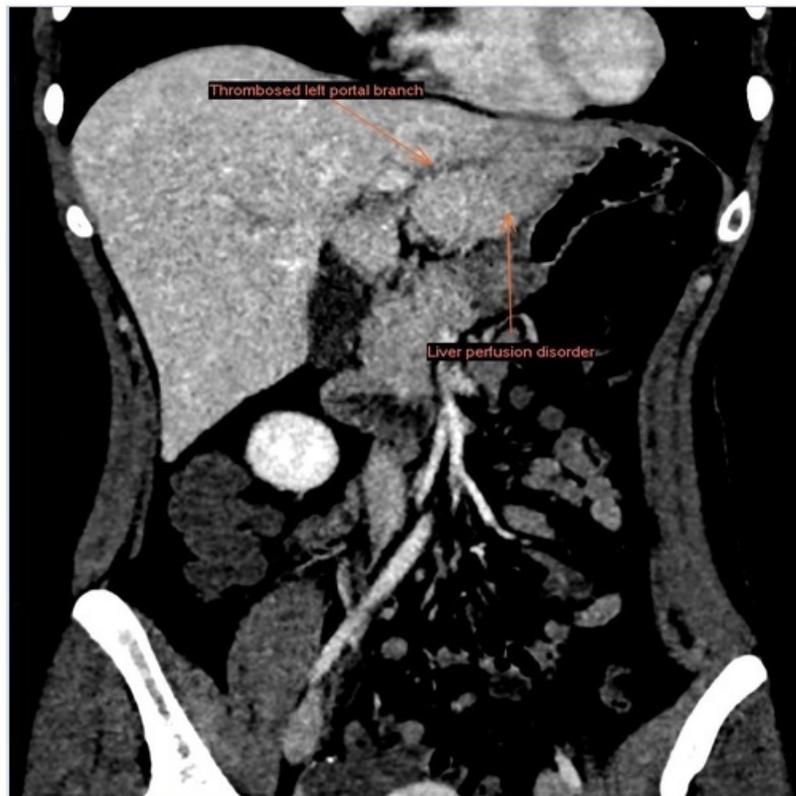


Figure 3: Coronal CT image. Diagnosis of pylephlebitis with impaired perfusion in segment II of the liver

In conclusion, pylephlebitis is a rare complication although it is a serious condition with significant morbidity and mortality, which can complicate intraabdominal sepsis of any etiology, most commonly diverticulitis and appendicitis. It begins with thrombophlebitis of small veins draining an area of infection, being able to extend to larger veins and cause thrombophlebitis of the portal vein and also can extend further and involve the mesenteric system. Polymicrobial origin is frequent, although the most common bloodstream cultures isolate *Escherichia coli* as in our case. Radiological demonstration of portal vein thrombosis (pylethrombosis) is necessary for the diagnosis, and the CT scan is the gold standard. Typical treatment regimens include combination therapy with metronidazole plus ciprofloxacin, initially parenteral administration, for at least four to six weeks. The association of anticoagulant treatment is debated, but in cases like ours with impaired liver perfusion or progression of thrombosis it is recommended (Grade 2C).