Aortic thrombosis recurrence in a Crohn's disease patient

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Question

A 43 years old women with ileo-colic Crohn's disease (CD) was admitted to Gastroenterology Unit of the S. Orsola Hospital in Bologna (Italy) for abdominal pain due to sub-occlusion related to CD relapse. At admission the patient referred constipation and abdominal swelling without fever since a week. Physical examination and laboratory tests were normal. After that, an abdominal computed tomography (CT) scan was performed.

What are the pathological features present in the Figure? Which could be the diagnosis?

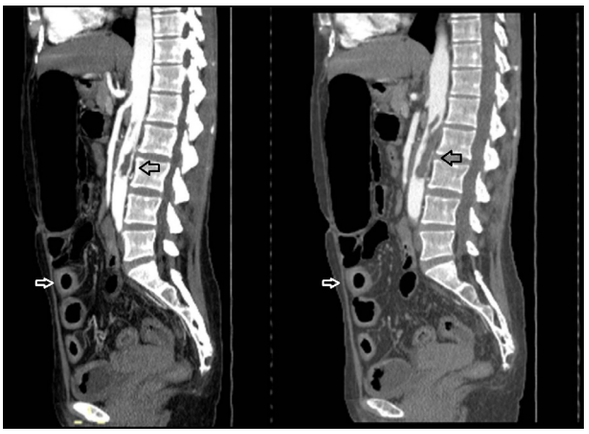

Fig. 1. — Abdominal computed tomography scan: upper arrows in both panels indicate aortic mural thrombi, lower arrows in both panels indicate thickened small bowel loop due to the Crohn's disease activity flare.

Answer

The CT scan showed the presence of aortic thrombi, showing a residual lumen of only 3 mm and thickened small bowel loop due to the Crohn's disease activity flare.

The patient did not present coagulopathies or others risk factors for thrombosis; she was treated with low molecular weight heparin and dismissed starting Adalimumab treatment for CD. After six months she was re-admitted to the hospital for abdominal pain due to a recurrence of aortic mural thrombosis. A re-treatment with heparin was administered and surgery for CD was proposed. The patients refused surgery and was discharged with oral anticoagulant therapy.

Patients with inflammatory bowel disease (IBD) have a 3.5 times greater risk than healthy to develop thromboembolic phenomena. Most of the cases of aortic thrombosis reported concern women with associated risk factors and a severe inflammation related to Crohn's disease that cause a local and systemic pro-thrombotic stimulus. We described a 43 years old woman without risk factors for thrombosis, such as thrombophilia, smoking, use of contraceptives, aneurysms, ulcerated atherosclerotic plaques or dissection. An aortic mural thrombosis is a rare event in patients with normal aorta or minimal atherosclerosis. However, this event may be associated with other comorbidities, such as IBD. The pathogenesis of thrombosis in IBD is not clear yet. Other triggers for thrombosis during recurrence of CD include immobility for hospitalization, dehydration, fistulae, abscesses, or central venous catheterization. In patients with IBD other autoimmune diseases like Takayasu's syndrome should be considered. Notable, in our case thrombosis' recurrence occurs during Adalimumab treatment. Thrombosis during treatment with anti-TNFα could be due to a lupus-like syndrome that may develops in susceptible subjects. It is possible that in our case, the recurrence of aortic thrombosis depends by both disease's recurrence and treatment with anti-TNFα.

In conclusion, aortic thrombosis is a rare and serious complication of active CD. Prevention of aortic thrombosis in patients with CD should focus on the control of activity disease and the elimination of risk factors. Physicians should take into account this complication in the management of patients with CD assessing the risk of venous and arterial thromboembolism.

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