

Abdominal aortitis associated with Crohn disease

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CASE PRESENTATION

A 26-year-old woman who was diagnosed with Crohn disease when she was 12 years of age presented with a two-week history of nausea, vomiting, worsening diarrhea and bilateral lower abdominal pain. The patient had a protracted history of Crohn disease treated with mesalazine, tapering short courses of corticosteroids for exacerbations and then 6-mercaptopurine therapy initiated three years before this presentation. Nine months before the patient presented, she was also started on subcutaneous adalimumab and maintained on a dose of 40 mg every other week. Her white blood cell count was $10 \times 10^9/L$ (65.5% segmented neutrophils, 28.9% lymphocytes, 4.8% monocytes), with a hemoglobin level of 123 g/L and a platelet count of $164 \times 10^9/L$. An abdominal computed tomography scan revealed multifocal areas of mural thickening with narrowing in the colon (Figure 1), long-segment minimal thickening with narrowing of the upper abdominal aorta and maximal luminal narrowing in an infrarenal aortic segment (Figure 2). These findings were suggestive of aortitis, which is very rarely associated with Crohn disease.

DISCUSSION

Aortitis associated with Crohn disease can be extensive, involving the entirety of the aorta. However, the usual sites of involvement include the aortic valve leaflets leading to aortic insufficiency (1) and the aortic root in the form of aneurysmal dilation. Aneurysmal dilation and occlusion of the aortic arch and aortic branches have also been reported. Localized disease involving only a short segment of aorta, such as in our patient, could lead to the development of aortic mural thrombus and subsequent embolization (2). It is of paramount importance to rule out Takayasu arteritis, which is known to be associated with Crohn disease (3). It is noteworthy that involvement of the aorta in Crohn disease frequently occurs in association with ankylosing spondylitis and a positive human leukocyte antigen-B27 phenotype (4). The patient demonstrated sacroiliitis on computed tomography scan of the abdomen (Figure 3), which could be related to an underlying spondylarthropathy versus the Crohn disease itself.



Figure 1) Transverse section showing decreased calibre of the abdominal aorta



Figure 2) Sagittal section showing maximal luminal narrowing in an infrarenal aortic segment

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Figure 3) Transverse section showing bilateral sacroiliitis

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