A 66-Year-Old Thai Man with Fever and Abdominal Pain
(See page 1346 for Photo Quiz)

Figure 1. Noncontrast CT of aorta. A, A 7 × 7-cm infrarenal aortic aneurysm (Ao) with a calcified wall. High-density periaortic fluid (arrow) of the same density as muscle represented leakage of blood. B, Aneurysm of the right and left common iliac arteries (RI and LI, respectively), especially at the right side, with high-density fluid (arrows) around RI emphasizing evidence of leakage.

Diagnosis: Salmonella group D aortitis (infrarenal portion).

After the CT scan was obtained (figure 1), the patient underwent abdominal aneurysmectomy with axillofemoral graft. Two specimens of the abdominal aneurysm were obtained for culture. There were no complications after surgery, and the patient’s condition improved. Two sets of blood cultures and the aneurysm tissue cultures grew group D Salmonella organisms that were susceptible to ampicillin, cefotaxime, norfloxacin, chloramphenicol, and trimethoprim-sulfamethoxazole.

Of all reported cases of Salmonella aortitis, Salmonella enterica serotype Typhimurium is the most common cause of aortic mycotic aneurysms [1]. Group D Salmonella (non-Typhi) serotypes are a rare cause of aortitis, causing <2.6% of all abdominal aortic aneurysms [2]. In most cases, group D salmonellae were identified in patients with preexisting atherosclerotic disease at the site of an infected aneurysm [3]; this reflects the ability of salmonellae to cause endothelial infection in the presence of atherosclerosis [4]. The majority of cases have involved the infrarenal portion of the abdominal aorta, and the main clinical presentations have been fever and abdominal and/or thoracic pain [1]. Infected abdominal aortitis aneurysms may be complicated by lumbar osteomyelitis (19% of cases), aortoenteric fistula—especially at the third portion of the duodenum (13%), and psoas abscess (9%) [1].

Reported mortality rates for Salmonella aortitis are high. In one study, the mortality rate was 96% (53 of 55 patients) after receipt of medical therapy, and it was 40% (37 of 91 patients) after combined medical and surgical intervention [5]. If performed, surgical procedures should include wide resection of the infected aorta and surrounding infected tissue, followed by reconstruction of the arterial flow using axillofemoral grafts [1]. Several factors were associated with improved survival among patients with Salmonella aortitis, including increased awareness, earlier diagnosis with contrast-enhanced CT, and long-term therapy with bacteriocidal antibiotics [1]. In recent years, successful treatment outcomes have been reported with the use of endovascular stent-grafts in selected patients [6, 7]. After surgery, our patient received a 2-week course of ceftria-
axone, followed by ampicillin (500 mg t.i.d.) for 90 days. At follow-up, the results of 2 sets of blood cultures were negative. At the 3-month follow-up visit after the completion of therapy, the patient had no evidence of ongoing infection.

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References


