



Infected Aortitis, Psoas Muscle Abscess and Infectious Spondylitis

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A 58-year-old man with a history of type 2 diabetes, hypertension, hyperlipidemia, and coronary artery disease status post percutaneous coronary intervention, presented with low back pain for 1 week and fever for 2 days. He denied recent trauma, stool, or urinary incontinence or hematuria. Physical examination revealed no abdominal tenderness, muscle guarding, or rebounding pain. The straight leg raising test was negative. Laboratory results showed leukocytosis (white blood cell count: 15,990/uL) and elevation of C-reactive protein (20.95 mg/dL). Urine analysis showed no remarkable finding. In order to evaluate the possible source of intra-abdominal infection, contrast-enhanced abdominal computed tomography (CT) was performed (Fig. 1). Infected aortitis complicated with psoas muscle abscess and infectious spondylitis was diagnosed.

Infected aortitis, a rare disease, mostly affects patients with atherosclerotic aortic disease, immunocompromised status, and/or infective endocarditis.^{1,2} Mycotic aneurysm is the most common form of presentation. *Salmonella* species and *Staphylococcus aureus* are the two most common pathogens because they tend to adhere and incubate on atherosclerotic plaques.¹⁻³ Early diagnosis of this disease is critical because it is potentially life-threatening. However, its clinical manifestations are often non-specific, and depend on the site of infection and aneurysm formation. Fever and chills with thoracic, lumbar, or abdominal pain are the most common symptoms.¹ Enhanced CT is a widely available tool to diagnose this disease. CT findings include aortic wall thickening, periaortic fluid

or soft-tissue inflammation, a rapidly progressing sacular aneurysm or pseudoaneurysm, the air within the aortic wall, and the involvement of neighboring organs.⁴ Treatments include broad-spectrum antibiotics in combination with open surgical excision of the infected aorta. In recent years, endovascular treatments have gained acceptance and have shown favorable results.^{1,3} *Salmonella*-related aortitis is known to have a fast progression and a risk of early rupture,^{2,3} while a favorable long-term post-operative outcome has been found due to the effectiveness of modern antibiotics.³ However, non-*Salmonella* infection and advanced age have been identified as the risk factors associated with serious late complications and mortality.^{2,3} A significant proportion of post-operative patients develop late infection-related complications which occur mainly in the first 6 months after discontinuation of antibiotics. Hence, at least 6–12 months of long-term antibiotics therapy is suggested in non-*Salmonella* aortitis.³ A need for vigilant antibacterial treatment and long-term following up is mandatory. In this patient, the blood culture yielded *Salmonella* group C finally. Despite 4 weeks of conservative antibiotic treatment, the aortic pseudoaneurysm developed (Fig. 2). He was transferred to a medical center for endovascular surgery and was uneventful after 1 year of follow-up. Infected aortitis complicated with concurrent psoas muscle abscess and infectious spondylitis has been scarcely reported in the literature. The emergency physician should keep infected aortitis in mind especially in patients with atherosclerotic risk factors and immunocompromised status, such as old age, diabetes,

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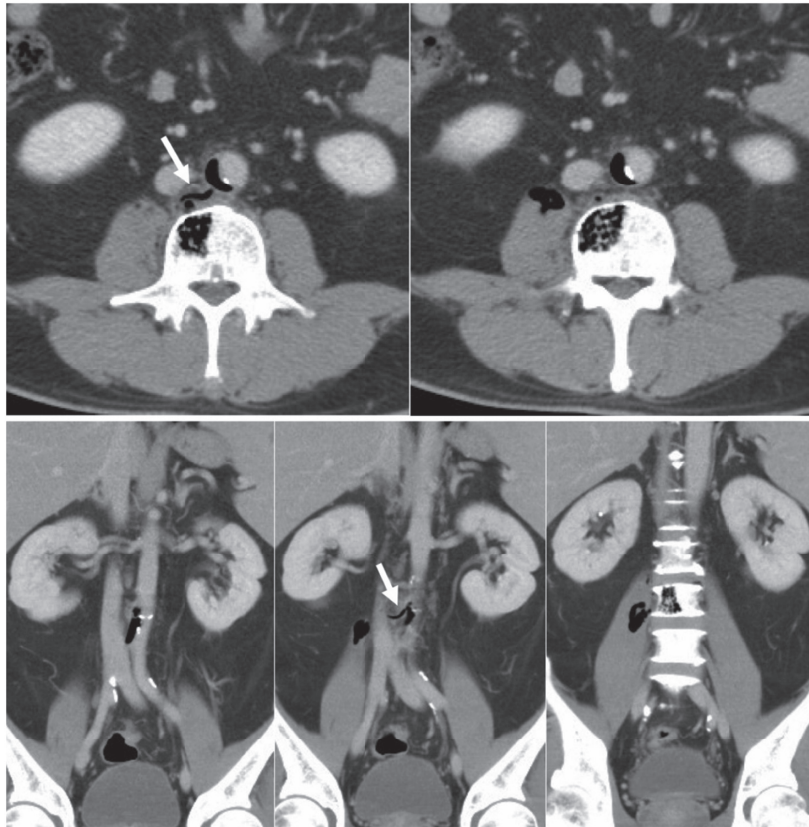


Fig. 1. The axial and coronal views of enhanced abdominal computed tomography showed gas accumulation beneath the atherosclerotic plaque of the abdominal aortic wall, L3 vertebral body, and right psoas muscle. A gas-filling fistula tract was also found (arrows).

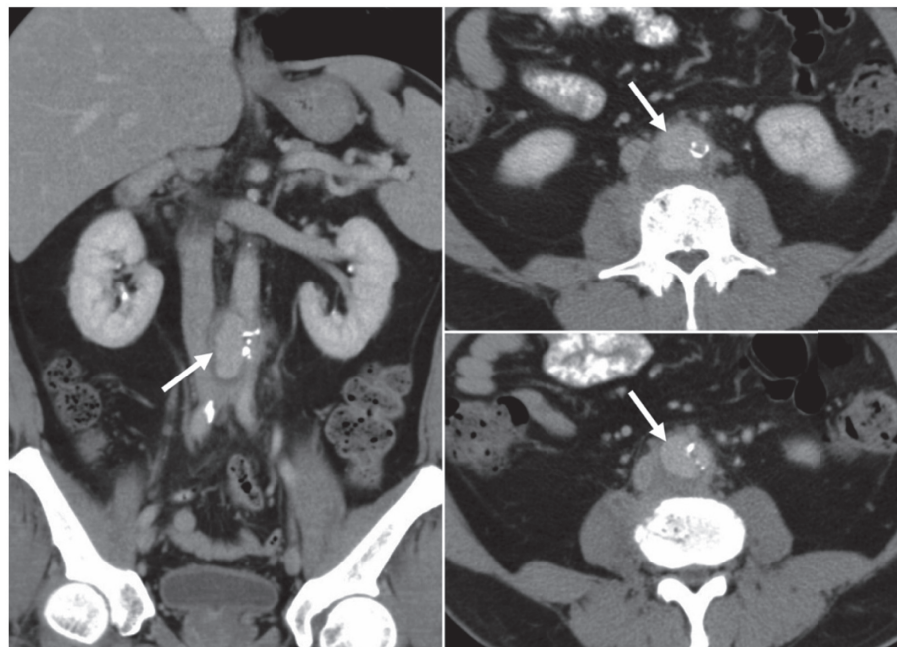


Fig. 2. The follow-up abdominal computed tomography scan after 1 month of antibiotic conservative treatment showed pseudoaneurysm formation (arrows) in the affected aorta.

and with prosthetic arterial devices presenting with unknown cause of fever and back pain. Moreover, this disease should be considered in patients with unknown causes of *Salmonella* species or *Staphylococcus aureus* bacteremia.

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