

# Anterior spinal artery syndrome due to *Clostridium septicum* aortitis



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The ethics committee waived ethics review board approval for publication of anonymized data in case reports. Written informed consent was obtained for the publication of the study data.

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Axial CT image showing periaortic gas in descending aorta, suggesting infectious aortitis.

## CENTRAL MESSAGE

*Clostridium septicum* aortitis is a rare and lethal disease associated with underlying malignancy.

See Commentary on page 9.

A-76-year-old previously healthy woman without medication use presented with paraplegia after awakening. Furthermore, she reported currently regressing back pain for the past 2 days. Findings of the physical examination confirmed paraplegia with preserved sense of proprioception and vibration. There were no clinical signs of myonecrosis. Computed tomography of the aorta revealed periaortic gas at the level of seventh thoracic vertebra (Figure 1, A, white

arrow) and thickened aortic wall (Figure 1, B, black arrowheads), suggesting infectious aortitis. In addition, a mass in the transverse colon was found. The patient was referred



**FIGURE 1.** Computed tomography of the descending aorta showing periaortic gas (A, white arrow) and thickened aortic wall (B, black arrowheads). Magnetic resonance imaging of the spine showing obstruction of the left ninth and tenth anterior segmental medullary arteries (C, white arrows) and demarcated spinal cord infarction (D, white arrowheads). Computed tomography of the descending aorta showing contained aortic rupture after 3-month (E, black arrow) and 1-year (F, black arrow) follow-up.

12 hours after the onset of paraplegia to our clinic for surgery. Magnetic resonance imaging of the spine revealed obstruction of the left ninth and tenth anterior segmental medullary arteries (Figure 1, C, white arrows) and a well-demarcated anterior spinal cord infarction extending from the seventh thoracic vertebra to the medullary cone (Figure 1, D, white arrowheads), confirming anterior spinal artery syndrome (ASAS).

Due to poor neurologic prognosis, the patient declined aortic surgery. Spinal fluid drainage as salvage therapy did not result in neurologic improvement. Blood cultures confirmed *Clostridium septicum* bacteremia, and empirical antibiotics were adapted to life-long therapy with metronidazole. Follow-up imaging after 3 months (Figure 1, E, black arrow) and 1 year (Figure 1, F, black arrow) showed contained aortic rupture. The patient died 1 year after the diagnosis due to infective endocarditis of the aortic valve. The classical presentation of ASAS consists of acute back pain and paraplegia. It is caused by the occlusion of

the largest anterior segmental medullary artery (artery of Adamkiewicz), primarily in acute aortic syndrome. Secondary causes include thoracoabdominal aortic surgery and interventions.<sup>1,2</sup> Infectious etiologies of ASAS are rare, and *C septicum* aortitis is associated with underlying gastrointestinal or hematologic malignancy.<sup>3</sup> Although the prognosis of *C septicum* aortitis is poor, emergent aortic surgery and restoration of the spinal perfusion are essential.<sup>4</sup>

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