Emphysematous infectious aortitis: a dramatic evolution

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An 83-year-old man was admitted to our institution with a 3-day history of severe retrosternal chest pain. The patient was febrile with blood investigations suggestive of an inflammatory syndrome. Computed tomography angiogram (CT-A) of the thorax was performed initially which revealed an aortitis with normal or slightly reduced inner aortic diameter (Panels A and B), and clear inflammatory thickening of the descending aortic wall (Panels C and D). Blood cultures were all positive for Clostridium septicum, a gram-positive anaerobic bacteria. Appropriate anti-microbial therapy consisting of Clindamycin and Metronidazole was started promptly. Early surgery was planned for, following stabilization of the inflammatory response.

A follow-up CT-A was performed 3 days after admission as the patient showed no clinical or biochemical amelioration of inflammatory response despite remaining haemodynamically stable. This showed a dramatic increase in aortic diameter from 25 to 46 mm (Panels E and F) with clear evidence of gas bubbles within the aortic wall and a complete disruption of its architecture (Panels G and H). The patient died suddenly within a few hours of the repeat scan just before the planned surgical intervention. The presumed cause of death was aortic rupture.

Clostridium septicum aortitis is known to be a rare but severe and lethal cause of anaerobic infectious aortitis. Surgery is thought to be at high risk before stabilization of the inflammatory response. This case highlights the very rapid and dramatic evolution of the infection despite early and appropriate anti-microbial therapy. Whether earlier surgical intervention will improve the clinical outcome of such patients remains unknown.

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