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Extended emphysematous aortitis of the ascending aorta: An unusual fatal presentation of aortic valve endocarditis due to Clostridium Septicum

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A 58-year-old man was referred to our department for aortic valve endocarditis. Blood cultures were positive for Clostridium Septicum, a toxigenic germ. He had history of recurrent ileo-colic neoplasia in the context of familial Lynch syndrome.

Echocardiography revealed a severe aortic valve insufficiency related to a posterior cusp perforation and an 8-mm vegetation of the antero-right cusp (Fig. 1A). Thoracic angioscanner showed an extended aortitis of the ascending aorta: irregular hypodense parietal thickening (8 mm) beginning upstream of the coronary ostia and extending to the subclavian artery with the presence of gas gangrene (Fig. 1B). The evolution was a fast extension of intra-parietal gas gangrene images on another scanner performed 24 h apart (to anticipate the surgery procedure) (Fig. 1C).

The patient underwent emergent surgery because of refractory acute pulmonary edema on day 1. The procedure was minimal (isolated aortic valve replacement with bioprosthesis) because the aorta aspect was highly inflammatory with many areas of intimal necrosis.

He then received daily hyperbaric therapy and antibiotics (piperacillin/tazobactam and clindamycin). A third scanner performed at day 6 visualized 2 septic false aneurysms of the ascending aorta (Fig. 1D, E). The patient died on day 10 subsequent to cardiac tamponade probably related to aortic rupture.

Bacteremia due to Clostridium Septicum is generally associated with cecal carcinoma or hematologic malignancy. Although few cases of aortitis have been reported, combined aortic valve endocarditis and aortitis has been reported in only 3 cases so far and all were fatal despite adapted antibiotics and surgery.

Conflict of interest: None declared

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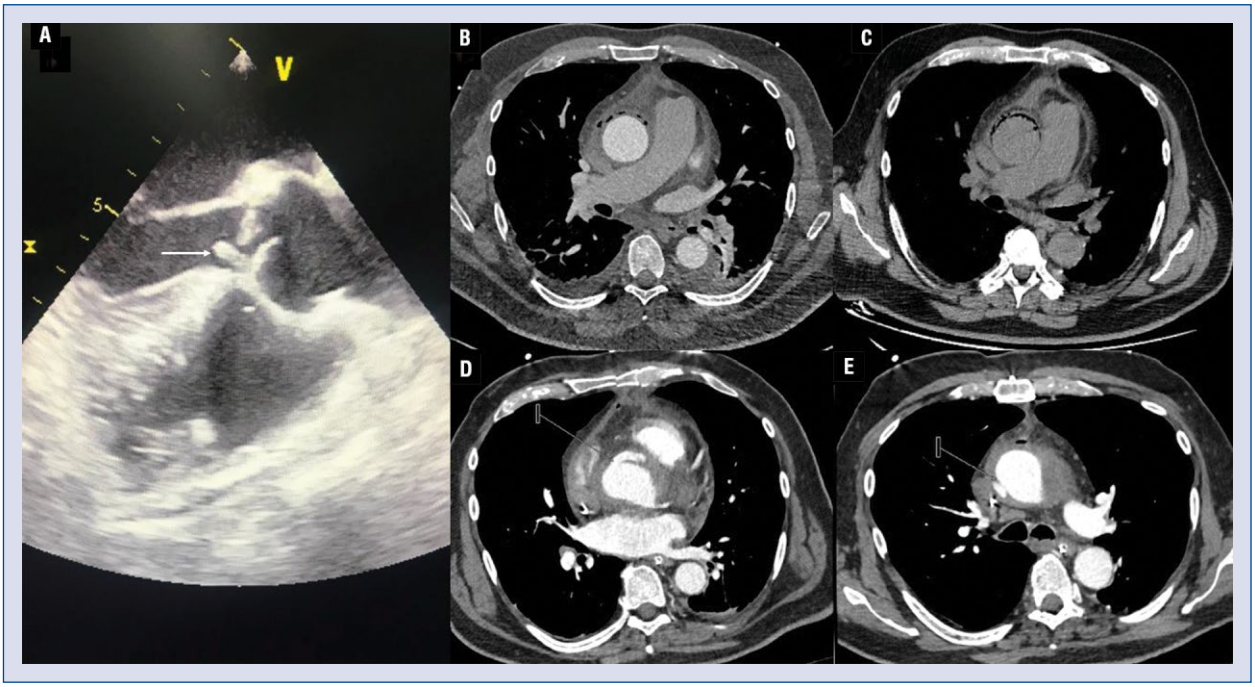

Figure 1. Extended emphysematous aortitis of the ascending aorta on thoracic angioscanner; **A.** Transoesophageal echocardiography showing an 8-mm vegetation of the antero-right cusp (indicated by the white arrow); **B.** Initial scanner showing irregular hypodense parietal thickening (8 mm) with the presence of gas gangrene; **C.** A second scan 24 h later showing a fast extension of the intra-parietal gas gangrene; **D, E.** A third scan at day 6 after surgery showing 2 septic false aneurysms of the ascending aorta (indicated by arrows).