Mycotic aneurysm of the aortic arch

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An 86-year-old woman was admitted because of back pain, dyspnoea and fever. She also complained about general malaise and anorexia. Because of suspicion of lymphoma a CT scan of thorax and abdomen was performed. No lymphoma was obvious. However, a mycotic aneurysm of the aortic arch was visible (Fig. 1). Blood and urine cultures grew *E. coli* sensitive to ciprofloxacin.

Mycotic aneurysm is an unusual, life-threatening pathological entity that encompasses a spectrum of different types of arterial infection associated with high morbidity and mortality. Mycotic aneurysm can develop either when a new aneurysm is produced by infection of the arterial wall

or when a pre-existing aneurysm becomes secondarily infected.

Arterial trauma, bacterial endocarditis, impaired immunity and salmonella septicaemia are common risk factors for developing mycotic aneurysm [1]. The growth of mycotic aneurysms is rapid—several centimetres per month. The virulence of the organisms and arterial blood pressure may be responsible for such rapid enlargement [2].

Early and precise diagnosis of aortic mycotic aneurysm may be difficult especially in the early stages because of lack of specific symptoms; however, it should be suspected in patients with fever of unknown origin who have undergone any invasive procedure of the cardiovascular system. CT scanning with contrast enhancement is considered to be the method of choice for the diagnosis of a mycotic aortic aneurysm. CT features of mycotic aneurysm of the aorta include a hazy aortic wall with rupture, gas-forming inflammation around the aneurysm, and thrombus formation within a false lumen after aneurysmal rupture [3].

Management options include antibiotic therapy alone or in combination with surgical or endovascular therapy. However, as far as we know, there are no randomised trials to guide the management of mycotic aneurysm. The prognosis of patients with mycotic aneurysms is poor and depends upon the artery involved, treatments received, and

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Fig. 1 Computed tomography of the thorax demonstrating the mycotic aneurysm of the aortic arch (focal dilatation of the aorta). Air pockets are visible, indicating gas-forming inflammation (arrow)

underlying conditions. Some reports of aortic mycotic aneurysms document a mortality of 23 to 60%. Prognosis may be better when medical and surgical therapies are combined [4].

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