

Coronary artery compression caused by the pseudoaneurysm of the mitral-aortic intervalvular fibrosa

An 84-year-old woman was admitted to our emergency unit with complaints of fever and left hemiparesis. On admission, a grade II/VI mid-systolic murmur was heard at the second right sternal border. Blood culture revealed a growth of *Streptococcus pneumoniae*. Transthoracic echocardiography showed severe aortic stenosis and a vegetation with the diameter of 1 cm attached on the mitral annulus. However, no vegetation was found near the aortic valve. She was diagnosed as having infective endocarditis, and an antibiotic regimen (24 million units of penicillin G and 80 mg of gentamycin per day) was started. MRI of the brain showed fresh small infarcts in the bilateral deep white matter. The patient and her family declined an operation, and only antibiotic treatment was continued. Two months after admission, she complained of mild chest pain. Ischaemic heart disease was suspected from her symptoms and electrocardiogram. CT of the heart clearly delineated the pseudoaneurysm of the mitral-aortic intervalvular fibrosa which compressed the left anterior descending artery superiorly (figures 1, 2). She refused surgical treatment again and died 2 weeks later.

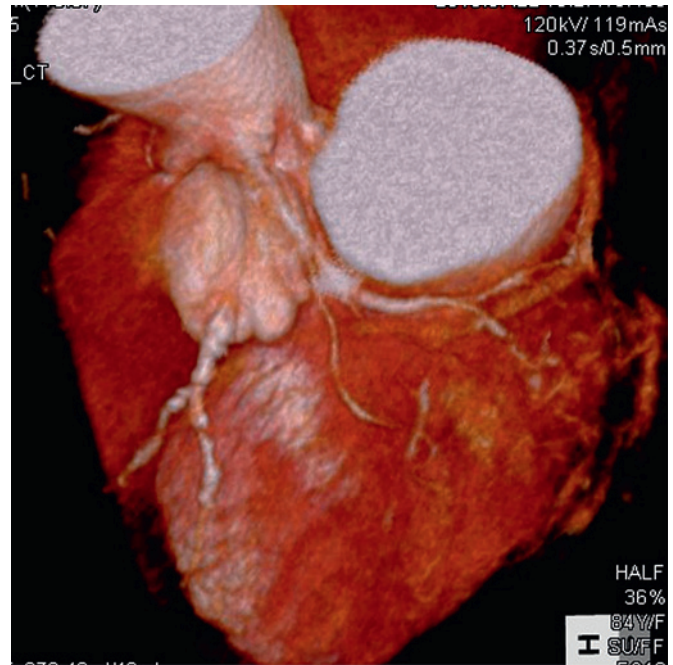


Figure 1 Volume-rendered image of the pseudoaneurysm. The left anterior descending coronary artery is surrounded by the pseudoaneurysm.

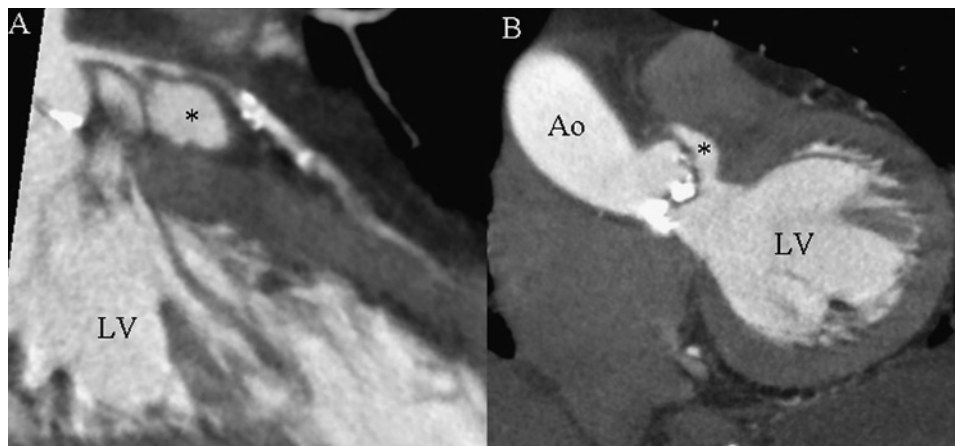


Figure 2 Multiplanar reformatted images. (A) Coronary artery, narrowed by the compression of the pseudoaneurysm. (B) Pseudoaneurysm, connected with the left ventricle just beneath the aortic valve. *Pseudoaneurysm; Ao, aorta; LV, left ventricle.

The mitral-aortic intervalvular fibrosa is a relatively avascular area and prone to infection and injury, resulting in pseudoaneurysm formation.¹ Sudhakar *et al* identified 89 cases of pseudoaneurysms of the mitral-aortic intervalvular fibrosa and reported 10 cases of pseudoaneurysms compressing one or more coronary arteries, especially the left circumflex coronary artery.² In this case, the pseudoaneurysm extended superiorly rather than laterally and compressed the left anterior descending coronary artery as depicted in the CT images.

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