A 65-year-old alcoholic man presented with subacute exertional dyspnea and left shoulder pain. Three years earlier he was bitten by a rat while feeding a pet snake, resulting in sepsis, which was treated with intravenous antibiotics. Cardiac catheterization at an outside hospital was interpreted as myocardial bridging of the circumflex artery, and transthoracic 2-dimensional echocardiogram raised suspicion of aortic dissection, resulting in a transfer to our hospital.

Chest radiograph at admission was unremarkable, but ECG revealed sinus tachycardia with inferolateral ST-T wave changes, suggestive of ischemia (Figure 1A and 1B). Bedside transesophageal echocardiogram with 3-dimensional full-volume reconstruction showed severe aortic stenosis and a large pseudoaneurysm (PSA) of the mitral-aortic intervalvular fibrosa, with a mobile calcification noted at the opening of the PSA cavity (Figure 2A and 2B and online-only Data Supplement Movie I). Cardiac computed tomographic angiography established the contiguity of the circumflex artery with the PSA (Figure 2C and online-only Data Supplement Movie I) and no aortic dissection. Cardiac catheterization films were reviewed and demonstrated phasic flow in the circumflex artery, which was extrinsically compressed (Figure 2D [arrow] and online-only Data Supplement Movie I) by the large PSA. The patient underwent aortic valve replacement with homograft, reimplantation of coronary arteries, and pericardial patching of the PSA (Figure 3). Note the PSA contiguity to the anterior mitral valve leaflet, shown in a similar way by the preoperative transesophageal study. The patient had no surgical complications and was discharged on the seventh postoperative day. It is interesting that blood cultures and DNA amplification of the operative tissue were both negative, suggesting chronicity of this process, which was not recognized until the patient developed symptoms equivalent to those of angina.

History of endocarditis or active infection is equally common among patients with PSA of mitral-aortic intervalvular fibrosa. It occurs more frequently in prosthetic aortic valves. Anginal symptoms are an uncommon presentation. Real-time multiplane transesophageal studies with 3-dimensional reconstruction and cross-sectional imaging with either multislice cardiac computed tomographic angiography or cardiac magnetic resonance seem to be superior for preoperative planning and detection of associated complications. Abscess with fistula formation and rupture into the left atrium, aorta, or pericardium can occur. Pericardial patching, even in asymptomatic patients, has been recommended.

Figure 1. Admission Studies. A, Portable anteroposterior chest radiograph demonstrated normal cardiac silhouette and lung parenchyma without pulmonary edema or pleural effusion. B, Twelve-lead ECG showed sinus tachycardia with inferolateral ST-T wave changes, suggestive of ischemia.
Disclosures
None.

References

Figure 2. Multimodality imaging of the mitral-aortic intervalvular fibrosa pseudoaneurysm (PSA). A, Systolic frame of a transesophageal (TEE) study at the midesophageal level. The long axis (120°) shows a large mitral-aortic intervalvular fibrosa PSA with systolic expansion and mobile calcification at the opening of the PSA cavity. Also note the calcified aortic valve (AV) with poor leaflet opening. B, Full-volume 3-dimensional TEE study of the mitral valve from the surgeon’s en face perspective demonstrating a large PSA in contiguity with the anterior mitral valve leaflet (AL). C, Cardiac computed tomographic angiography demonstrates the close relationship of the PSA and the midsegment of the circumflex coronary artery (LCx). D, Coronary angiogram in the left anterior oblique with caudal angulation showing extrinsic systolic compression (arrow) of the LCx caused by the adjacent large PSA. LA indicates ; LAA, ; LV, left ventricle; MV, mitral valve; and PL, posterior leaflet of the mitral valve.

Figure 3. Intraoperative findings. A, Preoperative large pseudoaneurysm (PSA; dotted circle) in close relationship with the anterior leaflet (AL) of the mitral valve. B, Postoperative pericardial patching of the PSA with AL of the mitral valve. Asc aorta indicates ascending aorta.
The Snake Raiser Heart: An Unusual Cause of Chest Pain
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