Fungal Obstruction of Transcatheter Aortic Valve Replacement Valve

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An aged pensioner with a history of exertional dyspnea and severe aortic stenosis underwent uneventful J-type upper hemisternotomy with direct trans-aortic transcatheter aortic valve replacement (TAVR) of a 23-mm Edwards valve. Planned for review at 3 months, she returned 4 weeks early complaining of lethargy with no features of cardiac failure. Echocardiography revealed a mass at the leaflet level confirmed via transoesophageal imaging to be a large, oval-shaped echogenic mass (1.7×1.6 cm; Figure [A]). Given unimpressive inflammatory markers, heparin was commenced with a provisional diagnosis of TAVR thrombus. On day 14, our patient was found unresponsive and, despite resuscitation, passed away shortly after. Postmortem demonstrated an obstructing mass across her aortic valve (Figure [B]) later revealed histologically to be an aspergilloma (Figure [C] and [D]), changing her cause of death from TAVR thrombus to fungal endocarditis. Prosthetic endocarditis is an uncommon but highly lethal complication of TAVR. Fungal endocarditis is often associated with recent surgery, and although minimally invasive, TAVR with its invasive catheters and hybrid surgical approaches may confer little protection in this regard. Large vegetations, thromboembolic phenomena, and nonspecific symptoms ought to raise suspicion in a population in which immunologic senescence and paravalvular leak may obscure the diagnosis.

Disclosures

None.

Key Words: aortic valve ◼ endocarditis ◼ transcatheter aortic valve replacement
Figure. A, Still frame of midesophageal echocardiogram at 130°, demonstrating mass attached to aortic valve prolapsing through to left ventricular outflow tract. B, Aortic root viewed from above showing complete occlusion of the aortic outflow by thrombus. Hematoxylin and eosin (C) and Grocott Methenamine Silver (GMS: D) stained sections of aortic root thrombus. Note septate branching hyphae of aspergillus on GMS stain.
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