

A Case of Aortic to Right Atrial Fistula During Transcatheter Aortic Valve Replacement

Benjamin M. Kristobak

Penn State Hershey Medical Center, Hershey, United States of America

Abstract

Aorto-atrial fistulas (AAFs) are rare lesions typically associated with paravalvular abscesses or aortic aneurysms. Iatrogenic AAFs have been described after cardiac surgery. While these lesions are often asymptomatic, they can cause shunting and volume overload. Diagnosis of AAFs can be challenging. Transesophageal echocardiography plays a critical role in their diagnosis. Case Report: A 91-year-old man undergoing transcatheter aortic valve replacement (TAVR) for severe aortic stenosis had extreme tortuosity of the aorta and iliofemoral vessels. The patient developed a fistula from the non-sinus of Valsalva to the right atrium during the procedure. After the procedure, the patient developed stroke and retroperitoneal hematoma. Conclusions: This case represents the first full report of an aorta to right atrial fistula after TAVR. The anatomy of the aortic root in relation to the right atrium and ventricle may make aorta to right ventricle fistulas more common than aorta to right atrial fistulas. This patient's vascular tortuosity may have played a role in the development of this lesion. Blood flow in an aorta to right atrial fistula occurs during both systole and diastole, making both right and left ventricle overload possible. Echocardiography is essential to the diagnosis of these lesions. Both vascular injury and landing zone rupture are possible during TAVR, although the observed timing and anatomy of this lesion suggest that it was caused during retrograde access of the left ventricular outflow tract via the ascending aorta.

Received: July 3, 2022; **Accepted:** July 10, 2022; **Published:** July 29, 2022

Biography

Benjamin M. Kristobak working in the Department of Anesthesiology and Perioperative Medicine in the Penn State Hershey Medical Center, Hershey, PA, United States of America.