Sinus of Valsalva Aneurysm Causing Extrinsic Compression of the Left Main Coronary Artery

Vishal J. Dahya, MD, Prasad Chalasani, MD

An 84-year-old woman with aortic valve stenosis presented with a month-long history of mid-sternal chest pain with exertion that was relieved with rest. Stress testing was performed, which revealed possible ischemia in the anterior wall. She then underwent coronary angiography and was found to have a giant aneurysm of the left sinus of Valsalva (Figure 1) causing critical left main coronary artery compression (Figure 2). Computed tomographic angiography revealed similar findings, which led to the diagnosis of crescendo angina secondary to extrinsic compression of the left main coronary from the giant sinus aneurysm (Figure 3). She was emergently taken to the operating room, and the
aorta was opened obliquely with wide exposure of the aortic root and aortic valve leaflets. The “mouth” of the aneurysm was identified, and the rim of the aneurysm was noted to be involved with the annular segment of the left coronary leaflet, as well as with the bottom of the left coronary ostia (Figure 4). A tailor patch of the native pericardium was sewn in to completely close the mouth of the aneurysm. Aneurysms of the left sinus of Valsalva are extremely rare, and compression of the coronary artery causing coronary insufficiency and anginal symptoms is an uncommon complication (1). These cases require an aggressive surgical approach once the diagnosis is made to prevent serious cardiac ischemia. Patients with this rare malformation who do not undergo prompt surgical correction are at risk for further aneurysmal dilation, malignant arrhythmias, left ventricular failure, and sudden death with rupture (2,3).  

REPRINT REQUESTS AND CORRESPONDENCE: Dr. Vishal J. Dahya, Department of Internal Medicine, Florida State University College of Medicine, 1115 West Call Street, Tallahassee, Florida 32304. E-mail: vdahya@mail.usf.edu.

REFERENCES

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