Fibromuscular Dysplasia Involving the Coronary Arteries

Savalan Babapoor-Farrokhran, MD*; Zachary Port,* MD

EINSTEIN MEDICAL CENTER, PHILADELPHIA, PENNSYLVANIA

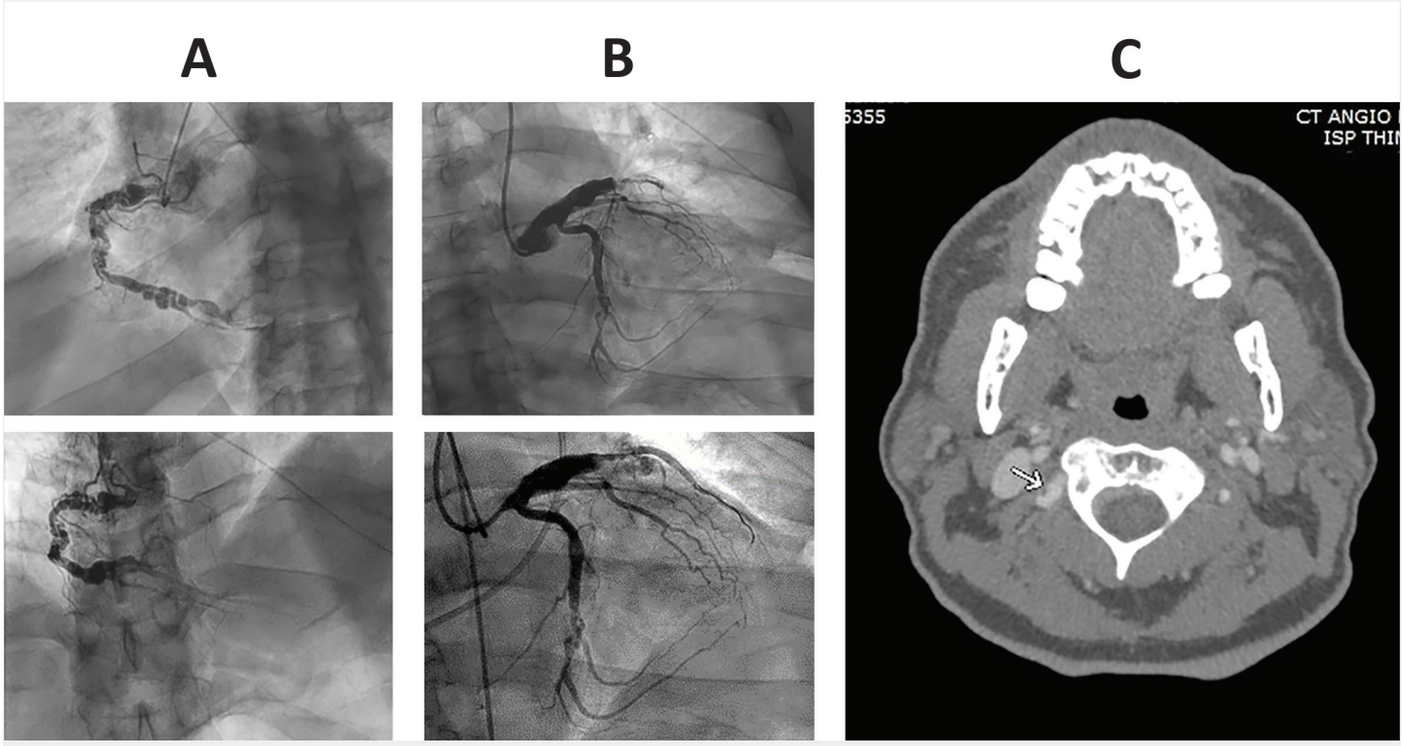

Figure 1.
(A) Coronary angiography of the right coronary artery demonstrating marked ectasia, critical narrowing, and aneurysmal dilatation. (B) Coronary angiography of the left coronary system demonstrating intraluminal filling defects in the left circumflex artery and the left anterior descending artery. (C) Representative computed tomography angiogram of the head demonstrating multifocal irregularity of the proximal V3 segment of the right vertebral artery.

A 59-year-old male with no known past medical history presented to the emergency department with typical cardiac chest pain. An electrocardiogram demonstrated anterior ST-elevation myocardial infarction with inferior infarct pattern. The patient was taken to the cardiac catheterization lab for emergent catheterization. Coronary angiography revealed severe multivessel coronary artery disease with multiple aneurysms suggestive of fibromuscular dysplasia. There was an acute thrombotic occlusion of the mid left anterior descending (LAD) into the first diagonal. The right coronary artery was a large-caliber vessel with marked ectasia, critical narrowing, and aneurysmal dilatation (Figure 1 A). The left circumflex artery was patent with mild proximal disease; however, it had intraluminal filling defects similar to the mid LAD consistent with fibromuscular dysplasia. A dissection was noted in the left circumflex artery (Figure 1 B). The patient underwent percutaneous coronary intervention (PCI) with a drug-eluting stent to the LAD lesion; however, the procedure was complicated by perforation of one of the patient's LAD aneurysms (Figure 1 B) and a hemopericardium. A covered stent was placed over the perforation while an Impella heart pump (Abiomed) and pericardial drain were placed for ventricular support and drainage

of the hemopericardium, respectively. During a postdischarge follow-up appointment, the patient reported experiencing anginal symptoms and underwent repeat angiography that revealed chronic total occlusion of the LAD. He subsequently underwent coronary artery bypass grafting of a saphenous vein graft (SVG) to the posterior descending artery and SVG-Y graft to the LAD. A computed tomography angiogram of the head showed multifocal irregularity of the proximal V3 segment of the right vertebral artery with maintained patency, also suggestive of fibromuscular dysplasia (Figure 1 C).

Acknowledgements:
The authors are grateful to their colleagues, who contributed invaluable clinical information.

Corresponding author:
savalan.babapoor@gmail.com

Conflict of Interest Disclosure:
The authors have completed and submitted the *Methodist DeBakey Cardiovascular Journal* Conflict of Interest Statement and none were reported.

Keywords:
fibromuscular dysplasia, saphenous vein graft