

IMAGES IN INTERVENTION



# Impingement of Left Main Ostium After Device Occlusion of Paravalvular Leak Post-Transcatheter Aortic Valve Replacement

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An 83-year-old woman presented with recurrent heart failure 2 months after transcatheter aortic valve replacement (TAVR) with a Sapien 23-mm valve (Edwards Lifesciences, Irvine, California). Echocardiography demonstrated severe paravalvular leak (PVL). A 6-F multipurpose guide was advanced across the PVL through which an Amplatzer Vascular Plug 2 12-mm occluder (St. Jude, Minneapolis, Minnesota) was advanced and deployed across the regurgitant track. Although the overall occluder position was adequate (Figure 1A), findings on ascending aortography and transesophageal echocardiography raised the possibility of partial obstruction of the left main ostium by the proximal disk of the device (Figure 1B). This was confirmed by intravascular ultrasound (Figure 1C). A 4.0 × 16 mm Promus drug-eluting stent (Boston Scientific, Natick, Massachusetts) was implanted within the left main ostium extending just proximal to the impinging occluder device (Figure 1D) and was post-dilated with a 5.0-mm noncompliant balloon (Figure 1E). Post-stenting intravascular ultrasound demonstrated exclusion of the occluder device and circumferential expansion of the stent within the left main ostium

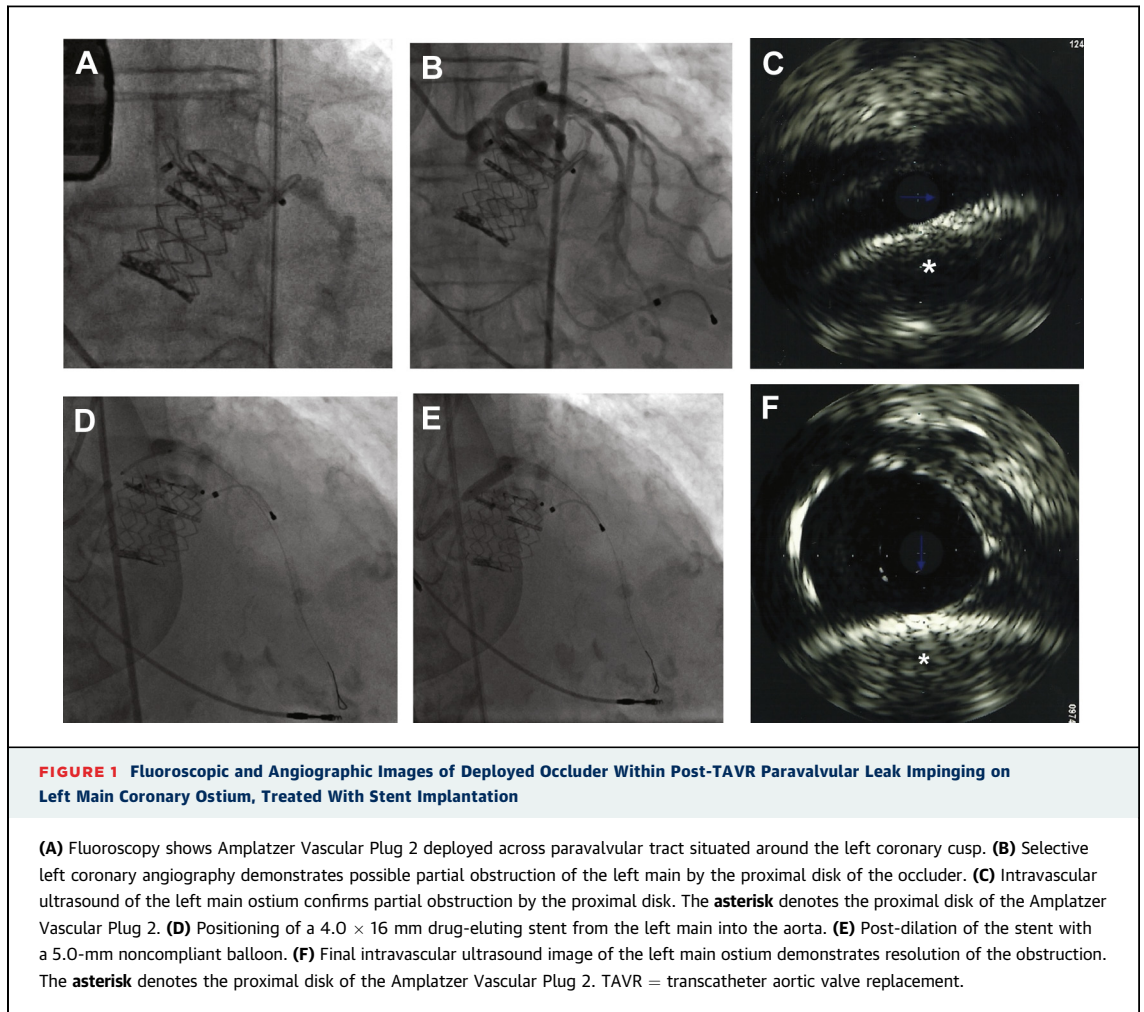
(Figure 1F). The patient was discharged home without complication.

Moderate and severe PVL after transcatheter aortic valve replacement have been associated with increased mortality (1). PVL closure with occluder devices is a feasible approach to treatment (2). However, depending on the location of the leak, the proximal disk of the occluder may interfere with the left main ostium, and operators must be aware of this possibility. In the setting of PVL closure that originates in and around the left coronary cusp, routine coronary angiography in multiple projections before device release may identify this infrequent complication so that the device may be easily recaptured. Intravascular ultrasound-guided stent implantation is a feasible approach to the treatment of left main impingement after post-transcatheter aortic valve replacement PVL closure when it is identified after device release.

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