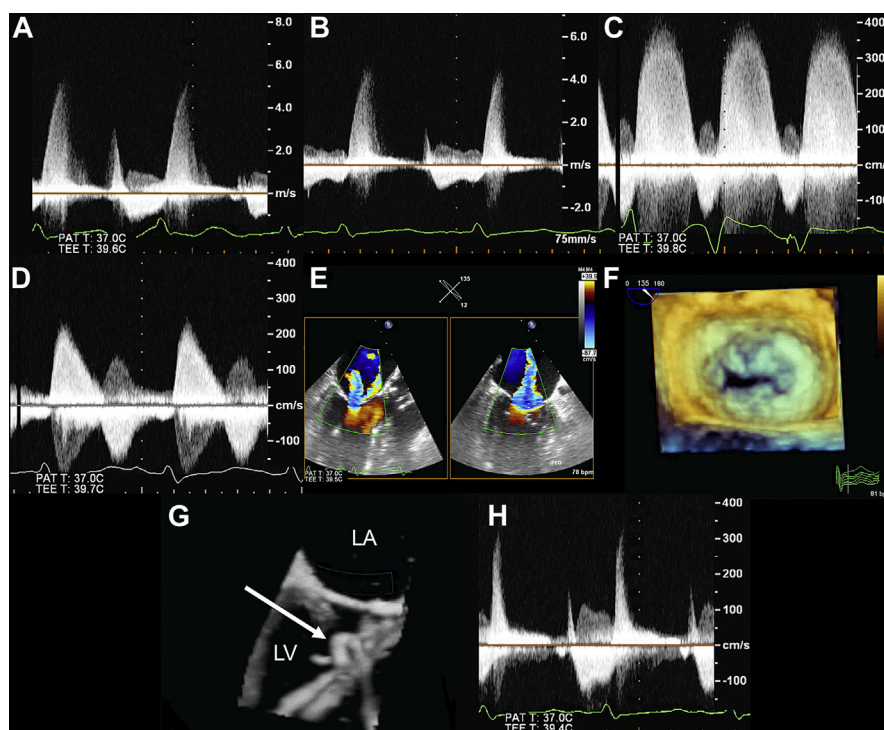


IMAGES IN CARDIOLOGY

Open Wide

Transient Wide-Open Mitral Regurgitation During
Transcatheter Aortic Valve ImplantationSteve W. Leung, MD,* John C. Gurley, MD,* Khaled M. Ziada, MD,* Hassan K. Reda, MD,†
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An 87-year-old woman underwent transcatheter aortic valve implantation (TAVI) for severe aortic stenosis via the transfemoral approach. Pre-procedural mitral regurgitation (MR) (A, [Online Video 1](#)) was mild. During guidewire positioning across the aortic valve, the MR was unchanged (B, [Online Video 2](#)). After balloon valvuloplasty, the MR increased in severity (C and D, [Online Videos 3 and 4](#)). Subsequent continuous-wave Doppler demonstrated wide-open MR flow with a triangular-shaped spectral envelope confirming rapid pressure equalization (E). Three-dimensional echocardiography revealed noncoapting mitral valve leaflets and wire impingement (arrow) of the chordae (F and G, [Online Videos 5 and 6](#)). With guidewire removal, the severe MR resolved (H, [Online Video 7](#)). Wire impingement of the mitral valve apparatus, causing the leaflets to “open wide” with transient severe MR, can occur during any portion of the TAVI procedure and must be monitored closely for early recognition and procedural modification. LA = left atrium; LV = left ventricle.