

IMAGES IN CARDIOLOGY

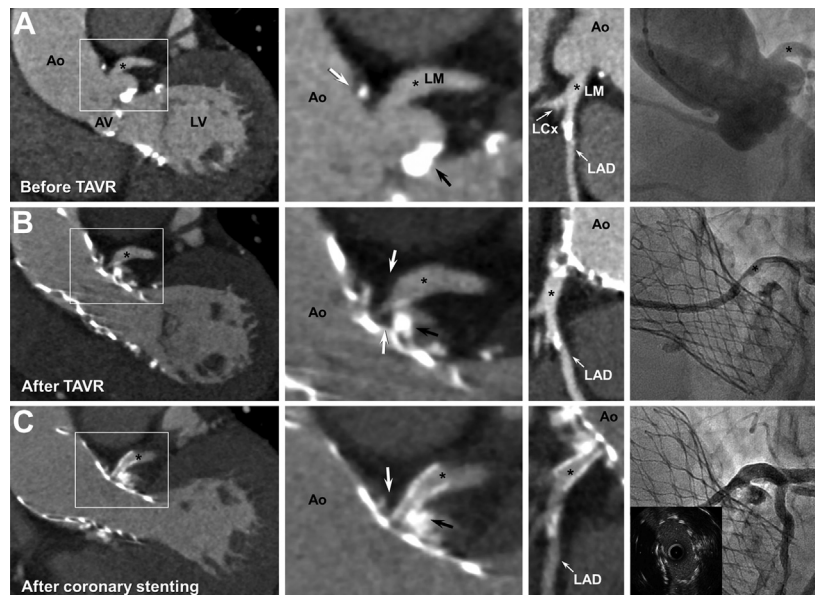
Migration of Calcium and Atheromatous Plaque in Computed Tomography



An Important Mechanism of Coronary Artery Occlusion After Transcatheter Aortic Valve Replacement

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An 80-year-old woman with severe aortic stenosis underwent transcatheter aortic valve replacement (TAVR) with a 26-mm Medtronic CoreValve (Medtronic, Minneapolis, Minnesota). Before TAVR, computed tomography (CT) showed the intact left main (LM) coronary artery (*), heavily calcified nodules in the left coronary cusp (black arrow), and prominent atheroma at the sinotubular junction, just above the LM ostium (white arrow) (A). After deployment, an LM ostium was partially occluded on the angiography. CT images immediately after TAVR showed previously noted calcified nodules of the left coronary cusp displaced upward toward the LM ostium and the plaque at the sinotubular junction migrated downward toward the LM ostium (B). Consequently, partial occlusion of the LM ostium (*) was noted on CT images, consistent with the angiographic findings. Percutaneous coronary intervention was performed. Coronary stenting moved the calcium and plaque outside from the LM ostium (*) with a sufficient post-stenting minimum stent area (10.4 mm²) by intravascular ultrasound imaging (C).

Our CT images clearly demonstrated the displacement of calcium of the native coronary cusp and plaque around the aorta (Ao) after TAVR as a mechanism of coronary artery occlusion. LAD = left anterior descending; LCx = left circumflex.