

A CASE OF A BREAKTHROUGH STROKE DURING DIRECT ORAL ANTICOAGULATION 1 YEAR AFTER TRANSCATHETER MITRAL VALVE-IN-VALVE REPAIRMENT

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**Purpose:** Patients with valvular heart disease treated with bioprosthetic valve replacement usually take vitamin K antagonist (VKA) for several months and afterward change to an antiplatelet agent. Here we present a case with a breakthrough stroke while on direct oral anticoagulation (DOAC) 1 year after transcatheter mitral valve-in-valve repairment.

**Methods:** An 84-year-old woman came to ER for dysarthria with left hemiparesis. She previously had had severe mitral stenosis with atrial fibrillation. She had a bioprosthetic mitral valve replacement three years ago. After two years, however, severe dyspnea developed due to valve failure. According to her old age and risk of bleeding, cardiologists performed transcatheter mitral valve-in-valve replacement without acute complication. After the procedure, she has been on edoxaban 30mg per day for one year before admission.

**Results:** On neurologic examination, she had a mild left nasolabial fold flattening, mild dysarthria, and left arm mild weakness (National institute of health stroke scale score 3). Computed tomographic angiography revealed distal MCA occlusion at the M3 segment of the superior division on the right, and MRI showed right frontal focal cortical infarction. During hospitalization, her neurologic symptoms were getting better, and anticoagulated with warfarin instead of DOACs.

**Conclusions:** While a short period of VKA was indicated and then changed to an antiplatelet agent for the patients with valvular heart disease replaced with a bioprosthetic (or tissue) valve, due to the high risk of systemic embolism, they may need to continue on VKA permanently.

