

# Complications of transcatheter aortic valve implantation

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**Introduction:** Transcatheter aortic valve implantation (TAVI) is a method for the treatment of patients with severe aortic stenosis (AS). These patients are mostly older people with a lot of comorbidities and a high risk for cardiac surgery. TAVI approach includes transfemoral, transaortic, transapical, trans-subclavian, and transcatheter. As with any other invasive procedure, TAVI carries the risk of complications. Perioperative complications include bleeding, valvular complications, arrhythmias, coronary artery occlusion, cerebrovascular insult, left ventricular perforation, and death. Postoperative complications include paravalvular regurgitation, valve thrombosis, bleeding, endocarditis, and death.<sup>1</sup> *Aim:* To present the complications of transcatheter aortic valve implantation (TAVI) and their management.

**Case report:** 84-year-old patient with symptomatic severe AS, comorbidities, and high risk for cardiac surgery. The valvular heart team has recommended TAVI implantation. The TAVI procedure was performed through a transfemoral approach after arterial puncture and placement of sheaths in both the right and left femoral arteries. After placing the wire in the left ventricle, the aortic valve was predilated with a 24 mm balloon, followed by the implantation of the L-size valve. Unfortunately, the valve migrated to the aortic root when the "delivery" system was pulled out. The valve was extracted using the SNARE system and a biopsy (forceps) and positioned in the ascending aorta. Then a new valve was placed with the optimal position that was confirmed by aortography. During the closure of the right femoral artery with the Manta system inadequate anchoring occurred due to the calcified plaque, which resulted in subocclusion of the artery shown on control angiographically. Therefore, the "cross-over" technique was used to approach the lesion from the left side to perform predilatation and implantation of the stent graft with an optimal final angiographic result.

**Conclusion:** TAVI is a minimally invasive treatment method used in patients with severe AS, comorbidities, and high risk for surgery. The most common complications in TAVI patients include vascular complications related to femoral access and paravalvular regurgitation.

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## LITERATURE

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