Incidence and management of CoreValve dislocation during transcatheter aortic valve implantation.

Abstract:

Transcatheter aortic valve implantation is a highly specialized technique offering a new therapeutic option to patients at high risk for conventional surgery. Complications associated with this catheter procedure differ from complications after surgical aortic valve replacement. This is to report incidence, management, and impact on morbidity and mortality of CoreValve dislocation during catheter valve implantation. Between June 2007 and September 2009, the self-expandable CoreValve prosthesis (Medtronic Inc, Minneapolis, Minn) was implanted in 212 patients through a transarterial (femoral or subclavian) access. Patients with severe aortic stenosis who were at high risk for conventional surgery were included. We observed dislocation of the prosthesis during CoreValve implantation in 21 patients. In 16 cases, the CoreValve could be implanted in the correct annular position after retrieving it and reloading the catheter. In 4 patients, the completely deployed prosthesis had to be placed in the ascending or abdominal aorta before implanting a second one. One patient underwent open surgery. Overall 30-day mortality was 11.0%, 21.5% in the dislocation group and 9.9% in patients without dislocation (P=0.024). Coronary ischemia, stroke, and renal failure occurred more frequently in patients with dislocation, whereas pacemaker dependency did not differ significantly between the groups. CoreValve
dislocation during transcatheter aortic valve implantation occurred in 10% of the cases and significantly increases perioperative risk for severe complications or death. It requires individual specific management and can be managed either interventionally or, rarely, results in open surgery.

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