

Elderly patients in need of heart valve replacements have alternative to surgery

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Doctors at the University Heart Center in Hamburg, Germany successfully used transcatheter valve-in-valve implantation in elderly patients with degenerated bioprostheses in aortic and mitral position. This minimally invasive procedure was used as an alternative treatment option for patients who were at high surgical risk. Full details of the study are available in the June issue of *Catheterization and Cardiovascular Interventions*, a journal published by Wiley-Blackwell on behalf of The Society for Cardiovascular Angiography and Interventions.

Recently, heart valve replacement surgery made headlines after broadcast journalist, Barbara Walters, underwent the procedure last month. Each year more than 300,000 patients worldwide have this surgery to repair problematic or diseased heart valves. The replacement valves can be mechanical, of which modern versions can last indefinitely, or tissue (xenograft) valves that on average last 15 years. With mechanical valves, patients must also be treated with anticoagulant drugs. However, reoperation which is the standard treatment to replace degenerated valves, is not always an option for patients who are at greater morbidity risk due to advanced age and other compounding issues such as [renal dysfunction](#).

In the current study, Moritz Seiffert, M.D., and colleagues report on their experience with transcatheter valve-in-valve implantation in 5 patients with significant xenograft degeneration of 15.4 years after aortic (n=4) and mitral (n=1) valve replacement. The mean age of patients was

82 years and predicted operative mortality was 55.8% based on the European System for Cardiac Operative Risk Evaluation (EuroSCORE). Successful transcatheter valve-in-valve implantation was performed in all patients through a transapical access with a 23-mm Edwards Sapien valve deployed into the degenerated valve.

Post-procedure results show the mean trans-valvular gradients were reduced from 31.2 to 19.0 mm Hg in the aortic location and 9 to 3 mm Hg in the mitral position. Doctors did not report any significant regurgitation (backwards blood flow). Two high-risk patients expired within 30 days due to low cardiac output and acute hemorrhage, respectively. One of the deaths occurred in a patient who presented with a EuroSCORE of 88.9%.

"Transcatheter valve-in-valve implantation offers an alternative treatment option for elderly patients who have disproportional operative risks," said Dr. Seiffert. The doctors highlight that reoperative valve surgery was not an option in these candidates and valve-in-valve implantation turned out to be a valuable bail-out procedure.

"As the aged population continues to grow, a minimally-invasive procedure such as transcatheter valve-in-valve implantation is a promising alternative," concluded Dr. Seiffert. "However adequate patient selection and an interdisciplinary approach are crucial to the success of this procedure."

More information: "Series of Transcatheter Valve-in-valve Implantations in High-Risk Patients with Degenerated Bioprostheses in Aortic and Mitral Position." Moritz Seiffert, Olaf Franzen, Lenard Conradi, Stephan Baldus, Johannes Schirmer, Thomas Meinertz, Hermann Reichenspurner, and Hendrik Treede. *Catheterization and Cardiovascular Interventions*; Published Online: June 15, 2010 ([DOI: 10.1002/ccd.22618](https://doi.org/10.1002/ccd.22618)); Print Issue: June 2010.

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