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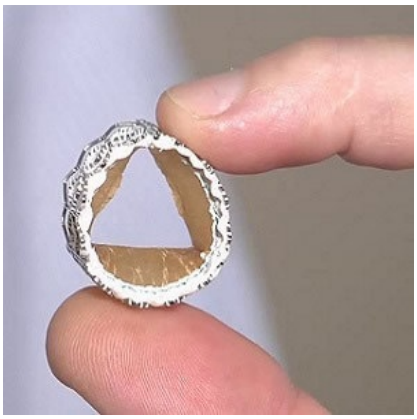
Half of Transcatheter Heart Valves Degenerate Within 10 Years



New reports from EuroPCR 2016 reveal that half of transcatheter heart valves undergo degeneration within 10 years. Findings from the first study to investigate the long-term durability of these valves were presented at the congress.

TAVI has now become increasingly popular among younger patients as well as those with lower surgical risk. Life expectancy after transcatheter heart valve implantation is believed to increase but the durability of these valves needs to be assessed over the short- and intermediate term explained lead author Danny Dvir of St. Paul's Hospital Canada.

The study was conducted with 704 patients who underwent TAVI more than five years ago in two centres - one in France and one in Canada. 378 patients were followed up with repeat echocardiographic examinations for up to 10 years. Patients who died within 30 days of TAVI, those with device failure immediately after TAVI and those will valve-in-valve procedures were excluded from the study.

Out of the study population, 100 patients survived at least five years after TAVI. They were the ones who were investigated for valve degeneration.

During the study period, 35 cases of valve degeneration were identified. Nearly two-thirds of the failed valves were associated with intravalvular regurgitation while the remained were associated with valvular stenosis. In a few rare cases, a mix of both stenosis and regurgitation was observed. A significant percentage of valves showed degeneration between five and seven years after TAVI.

The findings thus suggest that the eight-year rate of structural value degeneration was approximately 50 percent.

"Physicians performing TAVI in younger patients and in those expected to survive long after the procedure should be aware that the long-term rate of THV degeneration is not negligible, at least for first-generation THV devices," advises Dr Dvir. He suggests, "Physicians must be mindful of the limitations of the THV they implant and whether patients can be safely treated by another transcatheter approach, such as valve-in-valve, if a THV fails years later."

Commenting on the new findings, Pieter Kappetein, from Erasmus Medical Center, Rotterdam, the Netherlands,

says, "This is extremely important data and addresses the concerns that many people had when transcatheter heart valve were introduced: will they last as long as surgical bioprostheses? Can we therefore expand the indication to younger patient?" He adds, "Hopefully, the new generation of TAVI will last longer and there might also be a need for self-regenerating tissue-engineered heart valves. He concludes, "Expansion of TAVI indication should only take place in the confines of a randomised trial."

Source: EuroPCR 2016
Image Credit: Wikimedia Commons

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