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Single-center experience of 105-minimalistic transfemoral transcatheter aortic valve replacement and its outcome

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Abstract

Introduction: Transcatheter aortic valve replacement (TAVR) increases worldwide, and indications expand from high-risk aortic stenosis patients to low-risk aortic stenosis. Studies have shown that minimalistic TAVR done under conscious sedation is safe and effective. We report single-operator, the single-center outcome of 105 minimalist transfemoral, conscious sedation TAVR patients, analyzed retrospectively.

Methods: All patients underwent TAVR in cardiac catheterization lab via percutaneous transfemoral, conscious sedation approach. A dedicated cardiac anesthetist team delivered the conscious sedation with a standard protocol described in the main text. The outcomes were analyzed as per VARC-2 criteria and compared with the latest low-risk TAVR trials.

Results: A total of 105 patients underwent transcatheter aortic valve replacement between July 2016 to February 2020. The mean age of the population was 73 years, and the mean STS score was 3.99 ± 2.59 . All patients underwent a percutaneous transfemoral approach. Self-expanding valve was used in 40% of cases and balloon-expandable valve in 60% (Sapien3™ in 31% and MyVal™ in 29%) of cases. One patient required conversion to surgical aortic valve replacement. The success rate was 99 percent. The outcomes were: all-cause mortality: 0.9%, stroke rate 1.9%, New pacemaker rate 5.7%, 87.6% had no paravalvular leak. The mild and moderate paravalvular leak was seen in 2.8% and 1.9%, respectively. The mean gradient decreased from 47.5 mmHg to 9 mmHg. The average ICU stay was 26.4 h, and the average hospital stay was 5.4 days. Our outcomes are comparable with the latest published low-risk trial.

Conclusion: Minimalist, conscious sedation, transfemoral transcatheter aortic valve replacement when done following a standard protocol is safe and effective.

Keywords: Aortic stenosis; Conscious sedation; Minimalist; Transcatheter aortic valve replacement; Transfemoral.

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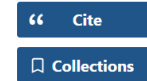
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