

TAVR associated with lower in-hospital complications in patients with aortic stenosis and cardiogenic shock

May 2 2024



Credit: Unsplash/CC0 Public Domain

A nationwide observational analysis of patients with aortic stenosis (AS) and cardiogenic shock (CS) who underwent transcatheter aortic valve replacement (TAVR) or surgical aortic valve replacement (SAVR) determined that patients who underwent TAVR had lower in-hospital complications and resource utilization compared with SAVR. The results were presented today at the Society for Cardiovascular Angiography & Interventions ([SCAI](#)) 2024 Scientific Sessions.

As many as [300,000 people in the United States are diagnosed with AS every year](#). It predominantly affects those aged 65 and older. In its most severe form, [life expectancy is only one to two years if not properly treated](#), a prognosis worse than most cancers. CS occurs often due to severe heart attacks and also comes with a poor prognosis: [a 50% mortality rate](#). AS and CS are difficult to treat and often have few successful procedure outcomes. There is little data on the use of TAVR vs. SAVR for this high-risk patient population.

The [retrospective cohort study](#) used the National Inpatient Sample database to identify patients hospitalized for AS-CS from 2016 to 2020 who underwent isolated TAVR or SAVR. In-hospital outcomes of TAVR vs. SAVR were compared using multivariable regression analysis. The data helps show the feasibility of TAVR, especially in patients who are already high-risk.

Of 13,215 patients hospitalized for AS-CS, 5,095 (38.6%) underwent isolated TAVR and 8,120 (61.4%) underwent isolated SAVR. The factors independently associated with TAVR selection in AS-CS included age ≥ 65 years, female sex, [renal failure](#), chronic pulmonary disease, prior coronary artery bypass grafting, and Impella support.

For SAVR, the factors independently associated with selection included Black race, Hispanic ethnicity, and [peripheral vascular disease](#). Compared with SAVR, TAVR was associated with lower odds of stroke

(adjusted odds ratio [aOR] of 0.48), [acute kidney injury](#), and major bleeding.

In-hospital mortality, pacemaker placement, and vascular complications were similar between the two, while length of stay was shorter and total costs were lower with TAVR (both P

"Results show that TAVR is a more feasible and safe option when compared to SAVR for some of the most high-risk patients who have AS and CS. We were initially able to see this in our clinical practice, so it is rewarding to share it with the cardiology community at this prestigious meeting," said Mahmoud Ismayl, MD, cardiology fellow and Assistant Professor at the Mayo Clinic, and lead author of the study.

"It is important that patients and cardiovascular professionals are aware of the benefits of the use of TAVR such as lower in-hospital complications and resource utilization because they are then able to advocate for the best treatment option."

Further studies exploring the long-term comparative safety and effectiveness of TAVR compared to SAVR among patients with AS-CS are warranted.

More information: "Transcatheter Versus Surgical Aortic Valve Replacement in Patients With Aortic Stenosis and Cardiogenic Shock" Saturday, May 4, 2024; 8:00-8:45 AM PT.

Provided by Society for Cardiovascular Angiography and Interventions

Citation: TAVR associated with lower in-hospital complications in patients with aortic stenosis and cardiogenic shock (2024, May 2) retrieved 11 July 2024 from <https://medicalxpress.com/news/2024-05-tavr-hospital-complications-patients-aortic.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.