Interventional Cardiology

INFECTIVE ENDOCARDITIS AFTER TRANSCATHETER AORTIC VALVE REPLACEMENT: INSIGHTS FROM THE NATIONWIDE READMISSIONS DATABASE

Poster Contributions
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Background: Infective endocarditis (IE) is a serious complication in patients with prosthetic heart valves. There are limited available data on the incidence, clinical predictors, and outcomes of IE after transcatheter aortic valve replacement (TAVR) in the United States.

Methods: Patients undergoing TAVR (ICD-9-CM codes 35.05 and 35.06) between January and November 2013 who survived the index hospitalization were identified in the Nationwide Readmissions Database. Incidence, clinical characteristics, and in-hospital outcomes of patients who developed IE after TAVR were examined. Cox proportional hazards regression was used to identify independent predictors of IE.

Results: Of 12,174 patients who underwent TAVR, 87 developed IE (incidence 1.5% per person-year; mean age 80.2 ± 9.3 years; 41.2% women) during a median follow-up period of 180 days (interquartile range [IQR]: 90-240 days). Median time to development of IE was 35 (IQR: 17.4-96.5) days. Cardiac arrest (hazard ratio [HR] 3.95, 95% confidence interval [CI] 1.40-11.18), obesity (HR 2.70, 95% CI 1.38-5.30), and longer length of stay (HR 1.02 [per day], 95% CI 1.00-1.05) during the index hospitalization were independently associated with an increased risk of IE. Age, sex, and diabetes mellitus were not identified as significant predictors. *Staphylococcus* (45.3%) and *Streptococcus* (37.8%) were the most common causative organisms. Median length of stay during the IE hospitalization was 10 (IQR: 6-20) days and in-hospital mortality was 19.0%.

Conclusions: In an analysis of patients undergoing TAVR using a comprehensive national database, cardiac arrest, obesity, and prolonged length of stay during the index hospitalization were associated with an increased risk of IE, likely due to a higher risk of post-procedural and hospital-acquired infections. These data will enable clinicians to identify high-risk patients and implement measures to prevent or decrease the risk of bacteremia and IE post-TAVR.