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How Common Is ACS After Transcatheter Aortic-Valve Replacement?

Acute coronary syndrome is infrequent, presents most often as non-STEMI, but is associated with high early mortality.

Although as many as 50% of patients who undergo transcatheter aortic-valve replacement (TAVR) have known coronary artery disease, the incidence of acute coronary syndrome (ACS) after TAVR is unknown. In a study using data on Medicare admissions occurring between 2012 and 2017, investigators identified 142,845 patients who underwent TAVR; 6741 (4.7%) had a subsequent ACS admission (mean age, 81; 55% men; black race, 5%).

Compared with non-ACS patients, those with ACS were younger and more likely to be male and of black race. The presenting ACS diagnoses were ST-segment elevation myocardial infarction (STEMI; 9%), non-STEMI (88%), and unstable angina (3%). Strong predictors of ACS included prior ACS (odds ratio, 2.97) and valve-in-TAVR (OR, 2.75). The median time between TAVR and ACS presentation was 297 days. Invasive management was used in 30% of patients, most often in those with STEMI (OR, 2.41) or cardiogenic shock (OR, 2.32). Percutaneous coronary intervention (PCI) was performed in 17% (STEMI group, 27%; non-STEMI group, 13%). Mortality at 30 days was higher for STEMI (31%) than non-STEMI (16%) or unstable angina (5%). In an adjusted analysis, mortality was lower with an invasive approach.

COMMENT

This large retrospective analysis of Medicare patients demonstrates that ACS after TAVR is infrequent and typically presents as non-STEMI. Few patients, usually those with STEMI, underwent PCI. Nonetheless, subsequent mortality was high for MI patients and lower with an invasive approach. As editorialists point out, the lack of data on presenting characteristics (electrocardiographic findings and troponin levels), type of TAVR prosthesis, and the reasons behind the conservative treatment given to most patients are important limitations to address in future studies. ***— Howard C. Herrmann, MD***

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Mentias A et al. Incidence and outcomes of acute coronary syndrome after transcatheter aortic valve replacement. **JACC Cardiovasc Interv** *2020 Apr 27; 13:938. (https://doi.org/10.1016/j.jcin.2019.11.027)*

Jabbour RJ et al. Looking toward the post-TAVR period and keeping options open for easy coronary access. **JACC Cardiovasc Interv** *2020 Apr 27; 13:951. (https://doi.org/10.1016/j.jcin.2019.12.012)*