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Abstract

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Perioperative Results and Complications in 15,964 Transcatheter Aortic Valve Replacements: Prospective Data From the GARY Registry.

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Abstract

BACKGROUND: Transcatheter aortic valve replacement (TAVR) has evolved into a routine procedure with good outcomes in high-risk patients.

OBJECTIVES: TAVR complication rates were evaluated based on prospective data from the German Aortic Valve Registry (GARY).

METHODS: From 2011 to 2013, a total of 15,964 TAVR procedures were registered. We evaluated the total cohort for severe vital complications (SVCs), including the following: death on the day of intervention, conversion to sternotomy, low cardiac output that required mechanical support, aortic dissection, and annular rupture; technical complications of the procedures (TCOs), such as repositioning or retrieval of the valve prosthesis and embolization of the prosthesis; and other complications.

RESULTS: Mean patient age was 81 ± 6 years, 54% of the patients were women, the median logistic Euroscore I was 18.3, the German aortic valve score was 5.6, and the Society of Thoracic Surgeons score was 5.0. Overall in-hospital mortality was 5.2%, whereas SVCs occurred in 5.0% of the population. Independent predictors for SVCs were female sex, pre-operative New York Heart Association functional class IV, ejection fraction <30%, pre-operative intravenous inotropes, arterial vascular disease, and higher degree of calcifications. TCOs occurred in 4.7% of patients and decreased significantly from 2011 to 2013. An emergency sternotomy was performed in 1.3% of the patients; however, multivariate analysis did not identify any predictors for conversion to sternotomy.

CONCLUSIONS: The all-comers GARY registry revealed good outcomes after TAVR and a regression in complications. Survival of approximately 60% of patients who experienced SVCs or who required sternotomy underlines the need for heart team-led indication, intervention, and follow-up care of TAVR patients.

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KEYWORDS: TAVR; aortic stenosis; conversion; heart team

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