

LETTERS TO THE EDITOR

Attention on Infection Following Transcatheter Aortic Valve Implantation

To the Editor—We have read with interest the study by Shi et al¹ on the incidence and risk factors for infection following transcatheter aortic valve implantation (TAVI). In their report, 35 of 253 patients had infections during the 30 days after the procedure; chronic obstructive pulmonary disease, postprocedural hemorrhage, and procedure-related stroke were identified as variables associated with the development of infection. Although infection has been recognized as one of the most common complications after surgery, its incidence, etiology, and impact following TAVI are not well defined yet. This study, with clear classification of infection types and determination of risk factors, certainly sheds some light on our understanding of this less discussed complication.

Compared with issues such as paravalvular leak, conduction disturbances, or stroke after TAVI, infections seem to be somewhat neglected. Although TAVI is minimally invasive, TAVI candidates usually have predisposing factors for infection, including age; poor pulmonary, renal, and immune function; diabetes mellitus; and need for ventilation and central venous access. Chronic obstructive pulmonary disease was associated with post-TAVI infection in both their univariate and multivariate analyses. In our group's previous systematic review,² infection/sepsis was the most common cause of death both within and beyond 30 days of TAVI in the pooled analysis. In this study,¹ the authors found 8 (22.9%) of those who developed a post-TAVI infection died whereas only 4 (1.8%) of those patients who did not have an infection died ($P < .001$). Moreover, Tirado-Conte et al³ also recently contributed research on this issue. During a median follow-up of 21 months, 51 of 303 patients experienced in-hospital infections after TAVI, with respiratory and urinary tract infections being most frequent. Patients with infections also had increased mortality during follow-up, as well as a longer hospital stay and higher readmission rate. These findings altogether demonstrate that infections play a major adverse role in postprocedural management of TAVI recipients.

Respiratory and urinary tract infections were the most frequent type of infections in this study,¹ whereas postprocedural hemorrhage requiring transfusion was found to be significantly associated with an increased infection risk. Some of these risk factors are potentially modifiable and emphasize the importance of implementing a standardized postprocedural protocol to offer our patients a quick and smooth recovery. Two recently published articles^{4,5} have recommended early removal of Foley catheters and other hemodynamic lines if possible. Expedited transfer from the critical care area to a cardiac step-down unit and criteria-driven early discharge were also encouraged in

suitable patients. Theoretically, infections can be expected to decrease once predisposing factors are modified by those enhanced recovery pathways. However, future randomized trials are needed to verify whether these proposed measures can lower infection rates or not.

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Comment on: The Carbapenemase Menace: Do Dual Mechanisms Code for More Resistance?

To the Editor—We read with interest the letter by Kazi et al¹ in which the authors reflect on the question of probable higher carbapenem minimum inhibitory concentrations (MICs) when dual carbapenem resistance mechanisms coexist.