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REVISTA ESPAÑOLA DE  
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## Impact of Acute Kidney Injury on Short- and Long-term Outcomes After Transcatheter Aortic Valve Implantation.

[Article in English, Spanish]

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### Abstract

**INTRODUCTION AND OBJECTIVES:** Acute kidney injury (AKI) is frequently observed after transcatheter aortic valve implantation (TAVI) and is associated with higher mortality. However, the impact of AKI on long-term outcomes remains controversial. Therefore, we sought to evaluate the impact of AKI on short- and long-term outcomes following TAVI using the Valve Academic Research Consortium 2 criteria.

**METHODS:** Consecutive patients (n = 794) with severe aortic stenosis who underwent TAVI were included in a multicenter Brazilian registry. Logistic regression analysis was used to identify predictors of AKI. Four-year outcomes were determined as Kaplan-Meier survival curves, and an adjusted landmark analysis was used to test the impact of AKI on mortality among survivors at 12 months.

**RESULTS:** The incidence of AKI after TAVI was 18%. Independent predictors of AKI were age, diabetes mellitus, **major** or life-threatening bleeding and valve malpositioning. **Acute** kidney injury was independently associated with higher risk of all-cause death (adjusted HR, 2.8; 95%CI, 2.0-

3.9;  $P < .001$ ) and **cardiovascular** mortality (adjusted HR, 2.9; 95%CI, 1.9-4.4;  $P < .001$ ) over the entire follow-up period. However, when considering only survivors at 12 months, there was no difference in both clinical endpoints (adjusted HR, 1.2; 95%CI, 0.5-2.4;  $P = .71$ , and HR, 0.7; 95%CI, 0.2-2.1;  $P = .57$ , respectively).

**CONCLUSIONS:** **Acute** kidney injury is a frequent complication after TAVI. Older age, diabetes, **major** or life-threatening bleeding, and valve malpositioning were independent predictors of AKI. **Acute** kidney injury is associated with worse short- and long-term outcomes. However, the **major** impact of AKI on mortality is limited to the first year after TAVI.

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**KEYWORDS:** **Acute** kidney injury; Aortic stenosis; Daño renal agudo; Edad avanzada; Elderly; Estenosis aórtica; Implante percutáneo de válvula aórtica; Mortalidad; Mortality; Transcatheter aortic valve implantation; Valve Academic Research Consortium

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