

## **Incidence of Acute Kidney Injury in the Patients Undergoing Surgical TAVI**

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### **Background:**

Acute kidney injury (AKI) occurs in 5-10% of patients after surgical aortic valve replacement. Very few data exist in the AKI associated with surgical aortic valve implantation (TAVI). We perform study to determine incidence, predictive factors and prognosis of AKI following TAVI.

### **Methods:**

We prospectively studied 45 consecutive patients (Logistic EuroSCORE 32.1±7.2) who underwent surgical transapical, transaortic or transaxillary aortic valve implantation (TAVI) with Edwards SAPIEN heart valve between October 2010 and October 2012 in our department. AKI was defined according to RIFLE criteria.

### **Results:**

AKI was identified in 11 patients (24.4%) and 2 (4.4%) patients required renal replacement therapy. The unadjusted in-hospital mortality rate was 18.2% (2 patients) in those patients with AKI and 5.9% (2 patients) in those without AKI (P = .015). Univariate analysis identified preoperative serum creatinine and blood transfusion as risk factors to be associated with AKI. By multivariate analysis preoperative serum creatinine level remained as the only independent predictor of AKI.

### **Conclusion:**

In this study, AKI occurred in one-fourth of the patients after transapical aortic valve implantation and associated with high risk of in-hospital mortality. Preoperative serum creatinine level was identified as the only predictor of AKI.