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Titel des Beitrags:
Frequency, determinants, and prognostic effects of acute kidney injury and red blood cell transfusion in patients undergoing transcatheter aortic valve implantation.

Abstract:
To determine the frequency and independent predictors of acute kidney injury (AKI) in addition to the prognostic implications of both AKI and periprocedural red blood cell (RBC) transfusions on 30 day and cumulative late mortality in patients undergoing transcatheter aortic valve implantation (TAVI). RBC transfusions have been reported to predict AKI following TAVI. Data on the prognostic implications of both factors, however, are lacking. 126 consecutive patients underwent TAVI with the Medtronic CoreValve Revalving System. AKI was defined according to the valve academic research consortium definitions as an absolute increase in serum creatinine>=0.3 mg dL⁻¹ (>=26.4 ?mol L⁻¹) or a percentage increase>= 50% within 72 hr following TAVI. Five patients on chronic haemodialysis and three intraprocedural deaths were excluded, leading to a final study population of 118 patients. AKI occurred in 19% of the patients necessitating temporary haemodialysis in 2%. Independent predictors of AKI included: previous myocardial infarction (OR: 5.72; 95% CI: 1.64-19.94), periprocedural (<24 hr) RBC transfusions (OR: 1.29; 95% CI: 1.01-1.70), postprocedural (<72 hr) leucocyte count (OR: 1.18; 95% CI: 1.02-1.37), and logistic EuroSCORE (OR: 1.08; 95% CI: 1.01-1.14). In patients with AKI, 30-day mortality
was 23% and cumulative late mortality (median: 13 months) was 55%. AKI (OR: 5.47; 95% CI: 1.23-24.21) and postprocedural leucocyte count (OR: 1.20; 95% CI: 1.03-1.38) were independent predictors of 30-day mortality while AKI (HR: 2.79; 95% CI: 1.36-5.71) was the only independent predictor of late mortality. AKI following TAVI occurred in 19% of the patients. RBC transfusion was found to be an independent predictor of AKI, which in turn predicted both 30-day and cumulative late mortality.