ACUTE KIDNEY INJURY

Findings thwart 'double-hit' hypothesis

Acute kidney injury (AKI) occurs in up to 30% of patients after cardiac surgery and is associated with significant morbidity and mortality. Patients scheduled for cardiac surgery routinely undergo preoperative coronary angiography, exposing them to contrast agents. The use of these two procedures in close succession has been proposed to result in a 'double hit' to renal function and amplify the risk of developing AKI. New findings, however, indicate that the timing between coronary angiography and cardiac surgery does not affect the risk of developing AKI.

To investigate the influence of the timing between coronary angiography and cardiac surgery on the risk of developing AKI, Byungsoo Ko and colleagues used AKIN and RIFLE criteria to retrospectively assess the incidence of AKI in 2,133 consecutive patients who underwent coronary angiography and cardiac surgery. 32% of patients met AKIN criteria for AKI whereas 18% and 5% met RIFLE criteria

for risk and injury, respectively. Age, BMI, diabetes mellitus, New York Heart Association class III/IV, cardiopulmonary bypass time and impaired preoperative renal function were independent predictors of AKI; however, the researchers found that risk of AKI was not influenced by the time between the two procedures. The researchers also performed subgroup analyses in patients with preoperative renal insufficiency or contrast-induced nephropathy. They found that the length of time between procedures also had no effect on the risk of AKI in these high-risk individuals. "We have concluded that there is no need to delay cardiac surgery for the sole purpose of renal recovery after coronary angiography", says Ko.

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Original article Ko, B. *et al.* Risk of acute kidney injury in patients who undergo coronary angiography and cardiac surgery in close succession. *Eur. Heart J.* doi:10.1093/eurheartj/ehr493