



Impediment of cardiac surgery associated acute kidney injury by a resourceful perfusion protocol: A propensity-scored analysis

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Abstract:

Acute kidney injury develops in up to 30% of patients who undergo cardiac surgery, with up to 3% of patients requiring dialysis. The requirement for dialysis after cardiac surgery is associated with an increased risk of infection, prolonged stay in critical care units and long-term need for dialysis. The development of acute kidney injury is independently associated with substantial short- and long-term morbidity and mortality. Its pathogenesis involves multiple pathways. Haemodynamic, inflammatory, metabolic and nephrotoxic factors are involved and overlap each other leading to kidney injury. Clinical studies have identified predictors for cardiac surgery-associated acute kidney injury that can be used effectively to determine the risk for acute kidney injury in patients undergoing cardiac surgery. High-risk patients can be targeted for renal protective strategies. Nonetheless, there is little compelling evidence from randomized trials supporting specific interventions to protect or prevent acute kidney injury in cardiac surgery patients. Several strategies have shown some promise, including less invasive procedures in those at greatest risk, natriuretic peptide, fenoldopam, preoperative hydration, preoperative optimization of anaemia and postoperative early use of renal replacement therapy. The efficacy of larger-scale trials remains to be confirmed.

Keyword: Cardiac surgery, Acute kidney injury, Perioperative complications, Prediction, Prevention, Therapy

Biography:

2008 Especialista en Anestesiología y Reanimación. Clínica Universidad de Navarra. • 2011 Fellowship en anestesia y



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