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## ASSESSMENT OF RENAL FUNCTION IN POSTOPERATIVE OF BYPASS CARDIOPULMONARY WITH THE USE OF DEXMEDETOMIDINE

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**Introduction:** The increase of 0.3mg/dL in serum creatinine defines the term acute kidney injury (AKI) and is associated with higher incidence of postoperative mortality in patients undergoing coronary artery bypass grafting surgery (CABG). Clinical studies regarding the influence of dexmedetomidine (DEX) on renal function are scarce. We evaluated the LRA in postoperative of patients submitted to CABG with and without cardiopulmonary bypass (CPB) under anesthesia with DEX.

**Method:** In this retrospective study it was made serial analysis of serum creatinine (SCr) until 48h after the surgery of 286 patients undergoing CABG under DEX to evaluate the incidence of AKI. We tested the homogeneity among groups, evaluating patients separately for the use of CPB and DEX. Each patient was evaluated with respect to their blood concentration of creatinine in the preoperative and postoperative: early, 24h and 48h. In each period, it was compared the creatinine concentration with a creatinine concentration preoperatively. If at least in one of the periods this comparison showed increased creatinine  $\geq$  0.3mg/dL, the patient was classified as having AKI. It has also assessed the risk of AKI in patients with preoperative blood creatinine changed: values between 1.1 to 2.0mg/dL for females or 1.3 to 2.0mg/dL for men) compared with patients with normal creatinine concentration.

**Results:** The results were homogeneous for weight, age and creatinine concentration altered to 2.0mg/dL preoperatively. Patients who used DEX and underwent CPB had a higher incidence of AKI, with  $p = 0.043$ . Among those who were not undergoing CPB, there was a higher incidence of AKI after DEX, but with  $p = 0.066$ .

**Conclusion:** The use of intraoperative DEX increased the incidence of AKI in the postoperative myocardial revascularization in patients undergoing CPB.

### Biography

Alexandre Fabricio Martucci went to medical school from 2001 to 2007 - School of Medicine, Universidade Federal do Paraná- UFPR, Curitiba/PR, Brazil, started his Post-graduating training program (Residency) in Anesthesiology at Hospital Santa Casa de Ribeirão Preto - SP - Brazil. In 2013 completed his Master Degree in Anesthesiology at the Department of Anesthesiology, UNESP: Dissertation "Assessing renal function after myocardial revascularization surgery using dexmedetomidine" and in 2016 completed his PhD in Anesthesiology at the Department of Anesthesiology, UNESP, in association with University of California San Diego: Thesis "Microvascular findings and acute kidney function and toxicity following administration of hemoglobin based oxygen carriers". Today he is Adjunct Professor at Universidade Federal de Goiás, Jataí-GO, Brazil.

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