

MEETING ABSTRACT

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Is perioperative pro-B-type natriuretic peptide a good tool to evaluate surgical risk in cardiac surgery?

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Background/Introduction

Predicting major adverse events and death in patients undergoing cardiac surgery is based on clinical risk scores such as Euroscore. This score has a moderate power for discriminating morbidity. Natriuretic peptides are well-established biomarkers in numerous clinical settings, prognostic, diagnostic and treatment of cardiac failure. In cardiac surgical patients the role of natriuretic peptides as risk markers is less well delineated.

Aims/Objectives

To assess the utility of natriuretic peptides as risk markers in cardiac surgery

Method

This study is a prospective longitudinal study of consecutive 135 patients undergoing on-pump cardiac surgery between 2012 and 2013. We evaluated preoperative euroSCORE II, preoperative and 24 h postoperative pro-BNP. The endpoints were: heart failure, renal failure, all-cause mortality at 12 months. Independent sample t-Test were performed.

Results

One hundred thirty-five patients were available for analysis. The mean EuroSCORE II was 2,49%. Fourteen patients (10%) experienced postoperative heart failure and 30 patients (22%) renal failure. Within 12 months after surgery, six patients died. The “t” test showed significant augmentation of preoperative and postoperative pro-BNP in relation to heart and kidney failure.

Discussion/Conclusion

Increased perioperative pro-BNP concentrations are associated with more incidence of postoperative heart failure and renal insufficiency. Elevated preoperative pro-BNP is not correlated with mortality. Postoperative pro-BNP adds little to the value of preoperative pro-BNP measurement alone.

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