

Abstract No. **4**

Category: **Acute Coronary Syndromes**

Title: **The use of preoperative beta-blockers is associated with better short and long-term survival in patients who underwent Coronary Artery Bypass Surgery**

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Abstract:

Background: Beta-blockers have decreased mortality in patients with myocardial infarction and heart failure. However, its preoperative use in cardiovascular surgery is still controversial. The aim of this study is to identify an association between the preoperative use of beta-blockers with decreased short and long-term mortality in patients who underwent isolated Coronary Artery Bypass Grafting (CABG).

Methods: This is a retrospective cohort from a prospective collected data base from July 2008 to August 2017 at Clinica Universitaria Colombia. We performed 1061 isolated CABG's. Clinical outcomes assessment were done by phone calls and medical records reviews. A multivariate Cox proportional hazard regression was used to evaluate differences in long-term mortality. A logistic regression analysis identified mortality predictors at 30 days after surgery.

Results: 375 (35,3%) patients were done on-pump and 686 (64,7%) off-pump. The mean age was 70,4 years (+/- 10,3). 426 (40,1%) were female and 635 (59,9%) male. 67 (6,3%) were done as emergency CABG and 985 (92,8%) received preoperative beta-blockers. Mean left ventricular ejection fraction was 46,9%(+/- 11,5%) and mean number of bypasses was 2,67 (+/- 0,83) with no significant differences between on and off-pump procedures. The mean follow-up time was 4,8 years. 30 day operative mortality was 4.51%. Logistic regression analysis identified EuroScore (OR: 1.13, $p < 0.001$) and preoperative use of beta blockers (OR: 0.081, $p < 0.001$) as predictor for 30 day operative mortality. At 10 year follow-up the mortality was 11.41%. Multivariate Cox regression identified the preoperative use of beta-blockers as a strong predictor for long-term mortality (HR:0.0056 , $p < 0.001$).

Conclusion: The preoperative use of beta-blockers is associated with a better short and long-term survival. Further prospective studies and clinical trials are required to confirm these results.