



Coronary Artery Bypass Grafting

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Abstract

Coronary Artery Bypass Grafting (CABG) can be associated with significant perioperative and postoperative myocardial damage and necrosis, which may occur in varying degrees. Intraoperative injury may result from cardiac manipulation, inadequate myocardial protection, and intraoperative defibrillation; in addition, postoperative myocardial injury may be associated with acute loss of bypass grafts. Cardiomyocyte necrosis may be detected through measurement of cardiac enzymes such as Troponin-T, CK, CKMB.

Aim:

1. To assess if preoperative trop-T levels predict risks and outcomes of CABG in patients with Recent Myocardial Infarction
2. To assess if elevated post-operative Trop-T levels co-relate with post-operative myocardial infarction
3. Determination of the threshold of Trop-T levels that are associated with an adverse postoperative outcomes, including myocardial infarction after CABG
4. To determine if non-infarct elevation of Trop-T can occur secondary to increased myocardial handling, hematomas, intra-myocardial coronaries

Result: A total of 100 consecutive patients undergoing CABG were selected. (N=100). 48 patients had elevated preoperative Trop-T levels (48%), with a mean Trop-T level of 0.247 (Range:0.024-3.28) Preoperative Echocardiography showed RWMA in 72 patients (72%). Positive troponin was associated with more significant comorbid conditions and more extensive coronary artery disease. There was no increase in mortality in patients with elevated preoperative Trop-T. (p=0.07). Finding of intra-myocardial coronary, hematomas co-related with increased post-operative Trop-T (p=0.03). Elevated post-operative Trop-T (as defined as 5 times normal reference range) did not co-relate with post-operative myocardial infarction (p=0.092), as per 2DECHO, ECG, clinical assessment.

Conclusion: Pre-operative Trop-T is a poor independent predictor of outcomes following CABG. Post-operative Trop-T levels do not co-relate well with post-operative myocardial infarction. Larger studies are needed to definite threshold level of post-operative Trop-T for predicting myocardial infarction, in conjunction with clinical data.

Biography

Yousuf Mohammed Raf is a senior resident in Sri Jayadeva Institute of Cardiovascular Sciences and Research, India.



11th World Heart Congress
Edinburgh, Scotland | June 15-16, 2020

Citation: Yousuf Mohammed Raf, *Coronary Artery Bypass Grafting*, Heart Congress 2020, 11th World Heart Congress, Edinburgh, Scotland | June 15, 2020, 04:04-03