**POSTOPERATIVE TROPONIN ELEVATIONS PORTEND A HIGH MORTALITY RISK EVEN IN LOW-RISK PATIENTS**

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**Objective:** Prior studies have shown an association between postoperative troponin elevation and all-cause mortality. However, among these patients it is unknown if there is a difference in all-cause mortality based on their preoperative risk. We suspect that postoperative troponin elevation forebodes a high risk of all-cause mortality regardless of preoperative risk.

**Method:** A retrospective chart review identified 548 patients (211 patients in the study group, 337 in the control group) who had undergone non-cardiac surgery that required an overnight hospital stay and had a troponin-I level drawn within 14 days of operation. The study group had a troponin-I of 2x the upper limit of normal (ULN) at 0.08 while the control group's troponin was below the ULN. Inclusion criteria: age 40-80 and at least two cardiovascular risk factors. Neurosurgical patients, chest trauma and PE were excluded. Individual NSQIP and RCRI preoperative risk scores were calculated. Kaplan-Meir survival analyses were performed on the study versus control group and within the study group comparing the low- and high-risk patients within 1 year of surgery.

**Results:** Of the study group, 28% were deceased within 1 year of surgery compared with 8% in the control group (p<0.001). The patients’ baseline characteristics (i.e. sex, age, and cardiovascular risk factors) were similar between the two groups. Within the study group, 71% were classified as low-risk per NSQIP, and 67% as low-risk per RCRI. Comparing the low- versus high-risk groups per NSQIP showed a 1-year survival of 79% versus 68% (p=0.083) respectively. Comparing the low- versus high-risk groups per RCRI showed a 1-year survival of 78% versus 73% (p=0.323) respectively.

**Conclusion:**Our work reveals that patients with postoperative troponin-I elevations have clinically significant all-cause mortality compared with those who do not have a troponin-I elevation. For the study group, mortality was clinically significant regardless of their preoperative risk classification. This study implies a potential role for postoperative troponin screening to identify high risk patients for further evaluation and close follow up, independent of their preoperative risk.