DIABETIC PATIENTS HAVE INCREASED PERIOPERATIVE CARDIAC RISK COMPARED WITH OTHER CLINICAL RISK FACTORS IN NON-CARDIAC SURGERY IN HEART-TYPE FATTY ACID-BINDING PROTEIN BASED ASSESSMENT

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Background: There is high incidence of perioperative cardiac mortality and morbidity in non-cardiac surgery. Heart-type Fatty Acid-Binding Protein (H-FABP) is a small cytoplasmic protein released from cardiac myocytes following an ischemic episode. It was shown that H-FABP is a useful prognostic marker in patients with suspected acute coronary syndrome who were troponin negative. The purpose of this study was to investigate H-FABP in detecting myocardial ischemia in patients who have clinical risk factors.

Methods: Sixty seven patients who have clinical risk factors, undergoing elective, intermediate risk, noncardiac surgery, were included. Blood specimens were analyzed for cTn-I and H-FABP levels before and 8 hours after surgery. A cutoff value of 7.5 ng/ml was used to define positive H-FABP levels, based on the 99th percentile for the 20 healthy controls. All patients 12-lead ECGs were obtained.

Results: None of the patients had chest pain. The mean (±SD) age of patients was 65±11 years, 61.1% patients were male. Twenty seven (40%) patients had a history of ischemic heart disease, 3 (4.4%) patients had a history of heart failure. Five (7.5%) patients with cerebrovascular disease history, 4 (6.6%) patients with diabetes, 46 (68.6%) patients with hypertension were included. The mean duration of the operations was 2.33±1.27 hours. The prevalence of beta blockers and/or statin therapy in the patients undergoing the noncardiac surgery in this study was 35.8% (24/67 patients). Twenty seven patients have increased H-FABP. Only one of them has cTn-I >0.1 µg/L. The presence of diabetes was associated with increased H-FABP at the postoperative period (p=0.01). Seventy eight percent (21/27) of patients in the H-FABP ≥7.5 ng/ml group had diabetes. There is no significant correlation with other risk factors.

Conclusion: Diabetic patients may have increased pre-operative cardiac risk compared with other clinical risk factors. HFABP can be used in detecting subclinical myocardial ischemia as well as myocyte necrosis at the early phase of postoperative period.