

Predictors of Prolonged Hospital stay and In-Hospital Mortality in Diabetic Female Patient's Post-Primary Percutaneous Coronary Intervention, Tertiary Center Experience

Ghada Shalaby¹, Azmat Khadija Niazi, Sameh Sabri², Asma Nabat Safar Alsilami², Reem Yousef Alhassani², Mohannd Amin Wasel Alhazmi², Mohamed Thabet Aoudallah², Sheeren Khaled³

AIM:

Although females represent a smaller percentage of STEMI patients concerning gender, multiple studies demonstrate that female gender and diabetes mellitus have a bad prognosis and higher mortality in STEMI patients. We aimed in this study to determine the predictors of prolonged stay and mortality in diabetic female patients with post-primary percutaneous coronary intervention (PCI)

METHODS AND RESULTS:

The study was conducted as a part of the STEMI registry in our center, it is a retrospective single-center study conducted between 2015 and 2020 including all STEMI patients who underwent primary PCI.

Out of 3081 STEMI patients, 16 % (N= 498) were females, 64% (n=318) of them were diabetics. Diabetic patients tend to present with STEMI at a younger age with a higher prevalence of hypertension (78% vs 45%, $p < 0.001$ for diabetic and non-diabetic patients respectively), obesity (40% vs 28%, $p = 0.006$), dyslipidemia, and history of IHD (ischemic heart disease). Diabetic females had higher lipid profiles including LDL (115.8 ± 50 vs 115.3 ± 35 , $p = 0.02$), total cholesterol (186.3 ± 56 vs 179 ± 40 , $p = 0.02$), and triglycerides (149 ± 108 vs 119 ± 76 , $p = 0.04$), more troponin leak (262 ± 88 vs 156 ± 75 , $p = 0.04$), and a higher incidence of renal impairment (1.2

± 1.5 vs 1 ± 0.7 , $p = 0.003$) although they had a

lower incidence of hemoglobin drop post-primary PCI (3% vs 8%, $p = 0.02$). Diabetic patients are less commonly presented by anterior wall myocardial infarction (47% vs 65%, $p = 0.001$), But tend to have a higher prevalence of left main significant disease in comparison to non-diabetic patients (4% vs 1%, $p = 0.06$). there was no significant difference ($p < 0.05$) between both groups regarding in-hospital outcomes (pulmonary edema, cardiac arrest, etc.) and in-hospital mortality. Our study finds a significant negative correlation between glycosylated hemoglobin and left ventricular ejection fraction (LVEF) ($p = 0.02$) but a positive correlation was noticed between HBA1c and in-hospital length of stay ($p < 0.001$). Regression analysis showed that hemoglobin drop, creatinine level, and post-primary PCI were significant predictors of prolonged in-hospital stay > 5 days. Though post-primary PCI left ventricular systolic function was the only significant independent predictor of mortality ($P = 0.02$) in female patients post-primary PCI.

CONCLUSION:

Bleeding, renal impairment, and left ventricular systolic function post-primary PCI were discovered to be significant predictors of prolonged in-hospital stay > 5 days, with

increased in- hospital stay per poor diabetic

control. However, post-primary PCI left

Ventricular systolic function was the only significant predictor of mortality among female patients post-primary PCI, with more LV function depression due to poor diabetic control.

-
1. University king Abdullah medical city
 2. Banha university, king Abdullah medical city
 3. King Abdullah medical city

CVRP