CORONARY

ACUTE MYOCARDIAL INFARCTION

CRT-100.14

Primary Percutaneous Coronary Intervention and biological sex Influence. Independent Risk Factors For Death And Major Events After Immediate- And Medium-term Follow-up

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BACKGROUND Coronary heart disease is the leading cause of mortality and morbidity. A higher mortality risk for women with acute ST-elevation myocardial infarction has been a common finding in the past, even after acute percutaneous transluminal coronary angioplasty (PTCA). Prior studies have reported worse results after PTCA in women than in men. However, recent data suggest that this difference is less marked.

OBJECTIVE To determine gender-related differences and risk factors for death and major events, both in-hospital and at six-month follow-up, of patients who have been admitted within the first 12 hours of ST-segment elevation acute myocardial infarction (AMI) and primary PTCA in order to set out whether there are gender differences in real-world contemporary treatment and outcome.

METHODS For two consecutive years, 199 consecutive patients were enrolled in the study, with ST-segment elevation AMI and primary PTCA without cardiogenic shock. The immediate outcome, in-hospital and six-month follow-up were studied. Multivariate Cox analysis was performed to identify independent predictors of death and major events.

RESULTS Clinical characteristics were similar in both groups, except that women were older than men (67.04 +/- 11.53 x 59.70 +/- 10.88, p<0.0001). In-hospital mortality was higher among women (9.1% x 1.5%, p=0.0171), as was the incidence of major events (12.1% x 3.0%, p=0.0026). The difference in mortality rates remained the same at six months (12.1% x 1.5%, p=0.0026). The independent predictors of death in multivariate analysis: were: female gender and age >80 years old. Independent predictors of major events and/or angina were: multivessel disease and severe ventricular dysfunction.

CONCLUSION After ST-segment elevation AMI and primary PTCA, the independent predictors of mortality throughout the follow-up were female gender and age >80 years, in both in-hospital and six-month follow-up.

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Ambulatory Holter Monitoring-Based Early Discharge Strategy (within 48 Hours) of Primary PCI Patients - An Observational Study (AESOP Study)

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BACKGROUND Primary PCI is the standard treatment for STEMI and has reduced mortality and hospital stay. We evaluated outcomes and arrhythmia burden of patients discharged very early after their PPCI (within 48 hours).

METHODS We enrolled 71 consecutive patients who underwent successful PPCI in a tertiary center. After excluding those who needed ICU care, staged revascularization, IABP, cardiac arrest, and procedural complications, 44 were included in the study. All underwent ambulatory ECG monitoring prior to discharge for at least 24 hours, and detailed rhythm analysis was done by physiologists blinded to the discharge status. Patients were divided into ED, early discharge group (within 48 hours), and RD, routine discharge group (after 48 hours), and were followed up for 18 months.

The mean age was 65.7 years (±SD12.1) and 55% were men. One-third of the patients were smokers and 17% were diabetics. Inferior MI was diagnosed in half, and all were treated with DES (mean number of stents 1.7±0.9). Radial access was used in 89% of cases, and 100% had immediate procedure success with restoration of TIMI 3 flow. All were treated with aspirin and prasugrel as per AHA/ACC/ESC guidelines. Median duration of hospital stay was 72 hours and 34.1% (n=15) were discharged within 48 hours (ED group). Higher proportion of patients in the ED group were men (73.3% vs. 48.3%, p=0.112), current smokers (80.0% vs. 29.4%, p=0.001), younger (mean±SD, in years, 55.5±7.5 vs. 70.7±11.4, p=0.001) and had better renal function (eGFR, mean±SD, mmol/l, 85.6±11.2 vs. 74.2±11.2, p=0.045). There were no differences in CV risk factors, vitals at admission, door to balloon time, peak troponin levels, left ventricular ejection fraction(53.5±8.5 vs. 47.3±9.4, p=0.680), between both groups.

RESULTS Cardiac rhythm analysis showed numerically higher mean heart rates in ED group (mean±SD, beats per minute, 66.1±9.9 vs. 73.1±11.7, p=0.060). No patient had life-threatening arrhythmia, 5 had transient AF (2 ED), 1 had transient second-degree AV block, 2 had <3 sec asymptomatic pauses (1 ED) and 3 had NSVT (1 ED). There was no difference in overall arrhythmia burden between both the groups. At 18-month follow-up, 2 patients died (overall 4.5%, both in RD group, p=0.541), 1 had TVR (RD group, 3.4%) and 1 had TLR (ED group, 6.7%).

CONCLUSIONS We have shown that significant arrhythmias are rare after PPCI, and discharge within 48 hours is a safe strategy after successful PPCI. If confirmed in large-scale multicentre trials, our findings may have significant implications on health-care resources and costs.

CRT-100.16

Impact of Chronic Kidney Disease on Length of Hospital Stay and Cost Among Patients Admitted with Acute ST-Elevation Myocardial Infarction: A Nationwide Inpatient Sample 2012-2014

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INTRODUCTION Chronic kidney disease (CKD) is a common comorbidity among patients with coronary artery disease. The objective of this study is to assess length of stay and hospitalization cost among patients with CKD admitted for ST-elevation myocardial infarction (STEMI).

METHODS A nationwide inpatient sample database from 2012-2014 was used to identify all patients admitted to hospital with STEMI using International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes (n=534,845). Patients with dialysis dependent CKD (n=8,100) and CKD without dialysis (n=51,285) were compared to non-CKD patients (475,460). Outcomes measured were length of hospital stay (LOS) and inflation-adjusted cost of hospitalization. Hierarchical linear regression analysis was performed, and p<0.05 was considered as the level of significance.

RESULTS Patients having CKD without dialysis and with dialysis had higher LOS compared to non-CKD patients (5.86±13.97, 7.57±26.06 and 3.99±11.09 days respectively, p<0.0001). Patients with CKD without dialysis and with dialysis had higher cost of hospitalization compared to non-CKD patients ($25,696±63,024, $35,666±104,940 and $23,264±49,712 respectively, p<0.0001). Other predictors for LOS in days and cost of care in $ are provided in **Figure 1**.

CONCLUSION Compared to non-CKD patients, CKD patients who present with STEMI increase LOS, cost of hospitalization, and overall health-care burden.