Results: Median MK level at baseline was 234 pg/ml (IQR: 0–647, normal range <750 pg/ml). Median MK at 10 minutes was 80,682 pg/ml (IQR: 52,395–122,425). Median MK remained elevated at 20 minutes at 92,949 pg/ml (IQR: 63,905–162,142). The magnitude of MK elevation increased with the dose of heparin administered (R-squared 0.29, p < 0.001). The degree of increase in MK level did not correlate with diagnosis, other medications, comorbidities or PCI.

Conclusions: Serum MK levels increased following heparin administration in a dose-dependent manner. The role of MK as a potential biomarker and therapeutic target in cardiovascular disease warrants further investigation.

http://dx.doi.org/10.1016/j.hlc.2019.06.431

Sex-Based Differences in Net Adverse Cardiovascular Events (NACE) Among MINOCA Patients

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Background: The ratio of women diagnosed with myocardial infarction with non-obscurative coronary arteries (MINOCA) is higher than women diagnosed with atherosclerotic MI. Among MI cohort, women tend to have relatively worse prognosis. It remains unknown if in the MINOCA group, underlying clinical characteristics and clinical outcomes vary according to sex of the patient. Our aim was to compare the net adverse cardiovascular events (NACE) between men and women diagnosed with MINOCA.

Methods: This observational two-centre cross-section study from Australia and Canada included consecutive MINOCA patients who fulfilled the European Society of Cardiology diagnostic criteria over a 4-year period. Demographic, clinical, and inhospital outcome data were evaluated. NACE was defined as a death, stroke, heart failure and major bleeding. Categorical data were compared by Chi Square or Fisher’s exact tests and continuous variables by ANOVA with post-hoc tests.

Results: Out of 645 patients were diagnosed with MINOCA there were 299 women (46%). Compared to men, women diagnosed with MINOCA were older (61 ± 12 vs. 64 ± 12 years, p = 0.0001) and tend to present less commonly as ST elevation MI (13% vs. 9%, p = 0.002). There was no statistical difference in cardiac risk factors, prevalence of atrial fibrillation, cancer and non-cardiac illness. There was no difference in NACE (2.9% vs. 2.9%, p = 0.92), death (0.3% vs. 0.3%, p = 0.91), stroke (0.3% vs. 0.3%, p = 0.33), or heart failure (2.9% vs. 2.4%, p = 0.67). Women had higher access site bleeding (p = 0.03).

Conclusion: There is no gender variability in NACE outcomes among patients diagnosed with MINOCA.

http://dx.doi.org/10.1016/j.hlc.2019.06.432

Simple Indices of Infarct Size Post ST-Elevation Myocardial Infarction (STEMI) Provides Similar Risk Stratification to Cardiac MRI

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Introduction: Myocardial Infarct Size (IS) evaluated soon after ST segment elevation myocardial infarction (STEMI) has prognostic significance, and can be assessed by cardiac magnetic resonance imaging (CMRI), biomarker levels and electrocardiogram (ECG) parameters.

Objectives and Methods: We aimed to determine whether readily available (and less expensive) methods of IS assessment, Selvester QRS scores from the 12-lead ECG and high-sensitivity Troponin T (hsTnT) levels measured ≥48h (plateau phase of hsTnT elevation), provide similar information to CMRI. We prospectively assessed these in STEMI patients treated with percutaneous coronary intervention (PCI) during index hospitalisation. The associations between IS, as assessed by these methods, and clinical outcomes at 24-months, a hierarchical composite of major adverse cardiac events (MACE) of death, re-MI, stroke and hospitalisation for heart failure, were determined.

Results: A cohort of 195 (86% male) first-time STEMI patients (54% anterior) with a median age 56 years [50–64] treated by either primary PCI (79%) or pharmaco-invasive PCI (21%) were studied. Plateau phase hsTnT levels, QRS scoring and CMRI-determined IS post-STEMI were significantly correlated (for anterior MI all comparisons r>0.10, p<0.01), the associations between these parameters for non-anterior MI were p>0.10. QRS scoring provided higher estimates of IS than CMRI. We performed binary logistic regression analysis to identify factors contributing to discordant scores (difference between acute and follow-up QRS IS of ≥6% myocardium) and MACE.

Conclusion: Post-PCI treatment of STEMI, hsTnT levels measured ≥48h and Selvester QRS scoring were strongly correlated with CMRI-determined IS. These parameters predicted MACE at 24 months, and so should be routinely assessed for post-STEMI risk stratification.

http://dx.doi.org/10.1016/j.hlc.2019.06.433