

Conclusions: Treatment times and clinical outcome were similar between Hispanic and non-Hispanic whites. These findings suggest that ethnic disparities to cardiovascular care can be overcome using an integrated regional STEMI system.

Outcome	Hispanic (n=1737)	Non-Hispanic whites (n=4637)	p value
Stroke	0.5	0.8	0.35
Emergency coronary artery bypass surgery	1.3	0.8	0.19
Vascular complications	1.1	0.9	0.69
Length of stay, days	5.0 +/- 1.1	4.8 +/- 4.3	0.31
In-hospital mortality	4.3	4.8	0.56

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Gender Differences in Patients Undergoing PCI for Acute Myocardial Infarction

Shirley Edwards, Brittany Wagman, Han Tun, Ray V. Matthews, Anilkumar Mehra, Michael Gaglia, Leonardo Clavijo, David M. Shavelle
 University of Southern California, Los Angeles, CA

Background: Previous studies suggest that women undergoing percutaneous coronary intervention (PCI) for acute myocardial infarction (AMI) experience increased complications (bleeding) and mortality compared to men.

Methods: The Los Angeles County+USC and Keck Hospital PCI Database were queried from January, 2008 to December, 2012 to identify all patients undergoing PCI with a diagnosis of AMI, including STEMI and NSTEMI. Eight hundred seventy-two patients were included: 182 women (21%) and 690 men (79%). Predictors of in-hospital mortality were determined using multivariable logistic regression analysis.

Results: Women were older and had a higher prevalence of diabetes and hypertension compared to men (Table). The prevalence of insulin dependence was higher and overall diabetes control was significantly worse for women compared to men. In contrast, men had a significantly higher prevalence of metabolic syndrome. The number of diseased vessels and number of bare metal and drug eluting stents received were similar between genders; women had a higher prevalence of left main disease. There was a trend for a higher prevalence of cardiogenic shock in women compared to men and intra-aortic balloon pump use was significantly higher in women. Unadjusted in-hospital mortality and occurrence of stroke was higher in women compared to men. However, after multivariable logistic adjustment for baseline differences, female gender was no longer associated with increased in-hospital mortality.

Conclusions: In AMI patients receiving PCI, females had increased unadjusted in-hospital mortality when compared to males. Baseline differences between genders, including age, ethnicity and severity of diabetes mellitus, explain this increase in mortality.

Variable	Female n=182	Male n=690	p value
Age, years	63 +/- 12	57 +/- 10	<0.0001
Hispanic	119 (65%)	361 (52%)	0.002
Diabetes mellitus	92 (51%)	225 (33%)	<0.0001
Insulin dependent	55 (30%)	122 (18%)	0.0002
HgA1c	7.8 +/- 2.2	7.1 +/- 2.2	0.01
Metabolic syndrome	65 (34%)	329 (48%)	0.0003
Hypertension	144 (79%)	468 (68%)	0.01
Stroke	4 (2.2%)	1 (0.14%)	0.008
In-hospital mortality	16 (8.8%)	23 (3.3%)	0.006

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Prediction of Myocardial Salvage by Modified Selvester QRS Score in Patients with ST-Segment Elevation Myocardial Infarction After Primary PCI

Ahmed ElMabmoudy Nayel,¹ Sameh Sabet,¹ Amir Sammy²
¹Ain-Shams University, Cairo, Egypt; ²National Heart Institute, Cairo, Egypt

Background: QRS scores correlate well with the final infarct size and post MI left ventricular function. Tc99m-Sestamibi scan, despite the radiation hazard, is the gold standard for assessing the infarction size before and after reperfusion and it is considered a reliable method for assess myocardial salvage.

Objective: To assess the ability of modified Selvester QRS score to predict myocardial salvage index measured by Tc99m-Sestamibi scan in patients with acute ST-elevation myocardial infarction after primary coronary intervention.

Methods: Thirty patients presented to by acute STEMI, eligible for reperfusion therapy, underwent primary PCI after injection of Tc-99m sestamibi then within 6 hours the 1st SPECT image was take (myocardium at risk). A follow up SPECT image was taken before discharge (final infarction size) and the myocardial salvage index was calculated. Modified Selvester QRS score (based on 37 criteria capable of generating a total of 29 points) was calculated on admission ECG and 90 minutes after primary PCI.

Results: The modified Sylvester QRS score calculated before 1yr PCI significantly correlated with myocardium at risk (r = 0.737, P<0.0001), and modified Sylvester QRS score calculated after 1yr PCI also significantly correlated with final infarction size (r = 0.641, P=0.0001) The percent of change in QRS score from before to after the procedure significantly correlated significantly with the myocardial salvage index (r = 0.764, P<0.0001). Multiple regression analysis showed that post procedure TIMI flow grade and changes in QRS score are independent predictors of myocardial salvage index (P = 0.03, <0.0001 respectively), while the QRS score before procedure, anterior location of the infarction and the presence of diabetes are independent predictors of the myocardium at risk (p = 0.0001, 0.0001, 0.036 respectively), and the QRS score after procedure, anterior location of the infarction and post procedure TIMI flow grade are independent predictors for the final size of infarction (p = 0.001, 0.021, 0.041 respectively). Receiver-operating characteristic (ROC) curve analysis for the value of change in QRS score in prediction of myocardial salvage revealed a sensitivity and specificity of 88.89% and 66.67% respectively, a positive predictive value and a negative predictive value of 96% and 40% respectively.

Conclusion: The percent of change in modified Selvester QRS score before and after 1yr PCI in patients with acute STEMI significantly correlated with the myocardial salvage index measured by Tc99m scan.

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Role of Subendocardial and Subepicardial Left Ventricular Functions in the Prediction of Left Ventricular Remodeling in Patients with Anterior Wall STEMI

Ahmed ElMabmoudy Nayel,¹ Adel Eletriby,¹ Walid Elhammady,¹ George Gendy²
¹Ain-Shams University, Cairo, Egypt; ²Dar Elshefaa Hospital, Cairo, Egypt

Background: Left ventricular remodeling has been associated with an impaired prognosis in patients after MI and is thought to represent an important therapeutic target in these patients. Reperfusion therapy can limit adverse LVR in patients with acute MI. Tissue Doppler imaging has permitted a quantitative assessment of subendocardial and subepicardial functions.

Objective: To determine if subendocardial and subepicardial functions assessment can predict LVR.

Methods: 75 consecutive patients with the first anterior STEMI who underwent primary PCI were enrolled in the study. Echocardiography was done for all patients 24-48 hrs after 1ry PCI and 6-month later. LV (ESV, EDV and EF), diastolic function parameters and Tei-index were assessed. Pulsed wave TDI was used to measure subendocardial and subepicardial functions and LV dyssynchrony index. LVR was defined as an absolute increase of ESV >20%.

Results: Only 60 patients completed their follow up. They were divided into two groups according to the occurrence of LVR. The 28 patients (46%) with LVR had higher peak CK-MB level, longer pain to balloon time, higher initial heart rate, lower post procedure TIMI flow and MBG, less frequent ST segment resolution and lower EF compared to no LVR group. Also they had higher Tei-index (p<0.000), lower