

**CRT-100.25**

**Safety and Efficacy of Aspiration Thrombectomy During Primary PCI: A Meta-analysis of Large Randomized Controlled Trials**



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**BACKGROUND** Recent randomized controlled trials (RCTs) have questioned the clinical efficacy and even safety of routine aspiration thrombectomy (AT) during primary PCI. A systematic synthesis of this randomized data is hence very timely to address this clinical equipoise.

**METHODS** We performed a meta-analysis of the larger (>150 patients) Randomized Controlled Trials (RCT) which compared aspiration thrombectomy with primary PCI alone. Our procedural end-points were Myocardial Blush Grade (MBG) of 0 or 1 and ST segment resolution (STR) of >50%. Mid-term end-points were mortality, reinfarction, target vessel revascularization and stroke >30 days after the procedure.

**RESULTS** We identified 11 large RCTs with 10,309 patients randomized to AT and 10,296 to routine strategy (RT). While AT was associated with significantly improved myocardial perfusion as demonstrated by MBG score (OR:0.69 [0.49-1.41]; p=0.01), there was no difference in the rates of ST segment resolution > 50% (OR:1.06 [0.81-1.38]; p=0.81) between groups. In the 30 day outcomes there were no differences in mortality (OR:0.89 [0.76-1.05]; p=0.76), reinfarction (OR:0.9 [0.71-1.15]; p=0.47), TVR (OR:1.06 [0.81-1.38]; p=0.67) and stroke rates (OR:1.49 [0.86-2.58]; p=0.29).

**CONCLUSION** Our meta-analysis of 20,605 patients who participated in large RCTs demonstrate improved MBG scores with aspiration thrombectomy compared to PCI alone, but no differences in STR >50%, mortality, reinfarction, TVR and stroke rates at 30 days. Our study supports the latest ACC/AHA/SCAI focused update document to recommend against the routine use of aspiration thrombectomy during primary PCI.

**CRT-100.26**

**Gender Differences in In-hospital Outcomes Following Percutaneous Coronary Intervention for ST Segment Elevated Myocardial Infarction in Elderly Patients**



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**BACKGROUND** Historically, studies have reported that women with ST segment elevation myocardial infarction (STEMI) have worse outcomes than men. However whether these gender differences persist among patients over 75 years of age remains unclear as this population has been underrepresented in clinical trials.

**METHODS** Using the national inpatient sample from 2007-2013, 35,637 patients over 75 years of age undergoing percutaneous coronary intervention (PCI) for STEMI were identifying. Using the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9 CM) codes, patients were identified. Baseline characteristics, procedural details and in-hospital outcomes were compared between gender groups. Analysis was performed using SAS 9.4 (SAS Institute Inc, Cary, North Carolina). Patients with missing data on gender, in-hospital outcomes and age were excluded.

**RESULTS** Elderly women presented with higher age, preexisting conditions and more anterior wall MI and demonstrated significantly higher in-hospital mortality and secondary outcomes; i.e., acute renal failure, cardiogenic shock, stroke, gastrointestinal hemorrhage and blood loss requiring transfusion (p<0.001).

**CONCLUSION** Gender difference in STEMI care have been previously described. Among patients undergoing primary PCI for STEMI, elderly women demonstrate higher in hospital mortality with overall worse outcomes as compared to men. These differences in this older cohort

of patients reveals that more effort needs to be made to understand why women fare worse than men.

Variable Name	Male (N=18052)	Female (N=17583)	P value
<b>Baseline Characteristics</b>			
Age(Years)**	80.67+4.46	82.07+4.91	<0.0001
Hypertension(n)	12248 (67.84%)	12867 (73.18%)	<0.0001
Diabetes Mellitus (n)	5211 (28.87%)	5126 (29.15%)	0.5512
Hyperlipidemia (n)	10240 (56.72%)	9627 (54.75%)	0.0002
Family History of CAD(n)	1355 (7.51%)	1114 (6.34%)	<0.0001
Prior MI (n)	1508 (8.35%)	1051 (5.98%)	<0.0001
Carotid Artery Disease (n)	321 (1.78%)	279 (1.59%)	0.1603
Congestive Heart Failure (n)	4273 (23.67%)	5130 (29.18%)	<0.0001
Chronic Pulmonary Disease (n)	2796 (15.49%)	2684 (15.26%)	0.5581
Peripheral Vascular Disease (n)	428 (2.37%)	301 (1.71%)	<0.0001
Renal Disease (n)	4968 (27.52%)	4031 (22.93%)	<0.0001
Cerebrovascular Disease (n)	927 (5.13%)	1027 (5.84%)	0.0034
Smoking (n)	4328 (23.97%)	2563 (14.58%)	<0.0001
<b>Procedural Detail:</b>			
BMS (n)	9121 (50.53%)	8761 (49.83%)	0.1866
DES (n)	7326 (40.58%)	7198 (40.94%)	0.4960
Mechanical Support (n)	65 (0.36%)	55 (0.31%)	0.4413
IABP use (n)	2163 (11.98%)	1889 (10.74%)	0.0002
<b>Location of the Heart:</b>			
Anterior wall MI(n)	5685 (31.49%)	5789 (32.92%)	0.0038
Inferior Wall (n)	9276 (51.38%)	8936 (50.82%)	0.2878
<b>In-Hospital Outcomes:</b>			
Acute Renal Failure (n)	3005 (16.65%)	2564 (14.58%)	<0.0001
Any Stroke (n)	268 (1.48%)	362 (2.06%)	<0.0001
Cardiogenic Shock (n)	2392 (13.25%)	2465 (14.02%)	0.0345
Acute Pulmonary Edema (n)	138 (0.76%)	149 (0.85%)	0.3811
GI Hemorrhage (n)	796 (4.41%)	911 (5.18%)	0.0006
Hemorrhage/Hematoma/Blood Loss Requiring Transfusion (n)	1193 (6.61%)	1654 (9.41%)	<0.0001
Cardiac Arrest (n)	1096 (6.07%)	1068 (6.07%)	0.9915
Death During Hospitalization (n)	1693 (9.38%)	1942 (11.05%)	<0.0001
Length of Stay (Days)	5.17+5.86	5.45+5.32	<0.0001

**CRT-100.27**

**Evaluation of Percutaneous Coronary Intervention With Stenting of Improvement of Left Ventricular Function in Patients With Single Vessel Coronary Artery Disease**



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**INTRODUCTION** LV function may improve after revascularization of coronary occlusions or using a significant amount of medication. However the quality of life of every patient who is indicated with a acute coronary syndrome is not well characterized.

**AIM** The purpose of the current study was to evaluate the effect of coronary stenting on systolic and diastolic LV function.

**MATERIAL AND METHODS** We studied 98 patient with coronary artery disease , ages 42-86 years (mean 56.6 years) referred for PCI with stenting. Echocardiography was performed in all patients before and within 48 hours after PCI stenting.

**RESULTS** From systolic indices : left ventricular EF (ejection fraction) significantly increased (from 42.55 % to 57.32 % p-value < 0.001), left ventricular Fs (fractional shortening) significantly increased (from 26.54% to 29.75%, p- value <0.001) and left ventricular wall motion scoring index significantly reduced (from 1.05 to 1.00, p value<0.001). From diastolic indicators : left ventricular E velocity increased significantly (from 0.79 to 0.84 Cm/sec, p-value <0.001), E/a ratio increased significantly (from 1.18 to 1.34, p value <0.001), left ventricular deceleration time had a significant reduction (from 230.33 to 219.42 msec, p value <0.001) and left ventricular IVRT decreased significantly (from 84.74 to 79.2 p value < 0.001).

**CONCLUSION** In this study, significant improvement in systolic and diastolic left ventricular function after angioplasty stenting were observed.