Aim To assess the effect of thrombus aspiration on TIMI flow grade and in-hospital mortality in PPCI-treated STEMI patients Main outcome measures: Post-PPCI TIMI flow grade and in-hospital mortality.

Method Analysis of prospectively collected data of all STEMI patients undergoing primary PCI between March 2008 and June 2011 at a regional tertiary centre.

Results A total of 2567 patients (mean age 63.2±13.4 years, 70.3% male) were included in this analysis. TA was performed in 1095 patients (42.7%) (the thrombectomy group), whereas 1472 patients (57.3%) underwent PPCI without TA (the non-thrombectomy group). Post PPCI TIMI flow grade 3 was achieved in 94.6% in the thrombectomy group compared to 88.7% in the non-thrombectomy group (adjusted OR; 2.0, 95% CI 1.41 to 2.83, p=0.0001). Overall in-hospital mortality was 4.5% (n=115). In a logistic regression model adjusted for many confounders, the use of thrombus aspiration was associated with a significant reduction in in-hospital mortality (2.7% vs 5.8%, adjusted OR; 0.514, 95% CI 0.29 to 0.93, p=0.027). Other independent predictors of in-hospital mortality in this model were advanced age, total ischaemic time, admission systolic blood pressure and heart rate, pre-procedural TIMI flow, admission haemoglobin and creatinine and multi-vessel coronary artery disease.

Conclusions In this large observational study of "real world" and unselected STEMI patients, manual thrombus aspiration during PPCI was associated with a significant reduction in in-hospital mortality and an increase in the rate of post-procedural TIMI flow grade 3. These findings further confirm the benefits of thrombus aspiration in these patients.

035 THROMBECTOMY AND PLATELET GLYCOPROTEIN IIB/IIIA BLOCKADE FOR STENT THROMBOSIS

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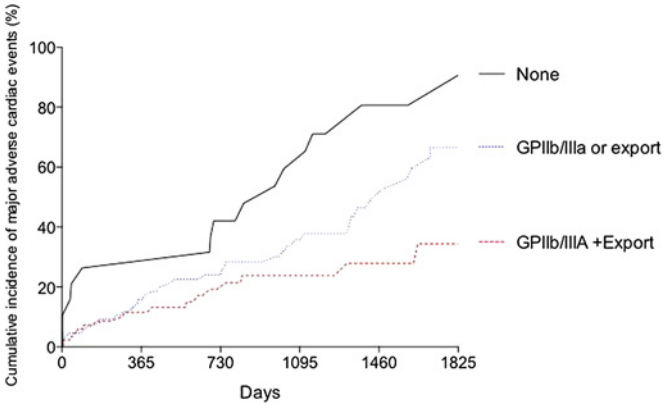
Background Both mechanical thrombectomy and glycoprotein (GP) IIb/IIIa antagonists have been shown to improve clinical outcomes following primary PCI for ST segment elevation myocardial infarction. There is limited data describing the use of these technologies in the setting of stent thrombosis. We aimed to assess the combined approach of mechanical thrombectomy with adjunctive glycoprotein (GP) IIb/IIIa antagonists in patients presenting with acute stent thrombosis.

Abstract 035 Table 1

	No GPIIb/IIIa or thrombectomy N=21	No GPIIb/IIIa or thrombectomy N=92	No GPIIb/IIIa or thrombectomy N=88	p Value
Age	55.25±30.0	64.05±11.7	62.72±12.6	0.060
Gender (female)	7 (35.0%)	29 (31.5%)	22 (25.0%)	0.517
Previous MI	10 (50.0%)	54 (58.7%)	60 (68.2%)	0.215
Previous CABG	1 (5.0%)	7 (7.6%)	5 (5.7%)	0.837
Hypercholesterolaemia	7 (35.0%)	53 (57.6%)	50 (56.8%)	0.165
Hypertension	11 (55.0%)	53 (57.6%)	51 (58.0%)	0.971
DM	4 (20.0%)	25 (27.2%)	24 (27.3%)	0.786
EGFR <60	4 (20.0%)	19 (20.7%)	21 (23.9%)	0.851
MV disease	6 (30.0%)	43 (46.7%)	36 (40.9%)	0.359
Card Shock	2 (10.0%)	6 (6.5%)	6 (6.8%)	0.855
EF <40	11 (55.0%)	34 (37.0%)	23 (26.1%)	0.035
Troponin (mean)	1.65±2.98	1.05±2.15	2.44±4.43	0.210
Procedural Success	17 (85.0%)	85 (92.4%)	85 (96.6%)	0.139

Methods This was an observational cohort study of 3040 patients who underwent PPCI from 2003 to 2011. The primary outcome was major adverse cardiac events (all cause mortality, myocardial infarction, target vessel revascularisation and stroke). Follow-up was for a median of 3.0 years (IQR 1.2—4.6 years). Patients were split into 3 groups; those who underwent PCI using mechanical thrombectomy and GP IIb/IIIa inhibitors, those receiving either GPIIb/IIIa inhibitor or mechanical thrombectomy and those receiving neither.

Results 201 patients (6.6%) of all STEMI patients presented with stent thrombosis (ST). Overall, GPIIb/IIIa inhibitors were used in 176 (87.6%) patients. Mechanical thrombectomy was used in 94 (46.7%) patients. 88 (44%) patients received both GPIIb/IIA inhibitors and thrombectomy, 92 (46%) received either GPIIb/IIIa inhibitor or thrombectomy and 21 (10%) received neither therapy. Baseline characteristics of these 3 groups are shown in Abstract 035 table 1. Patients receiving both therapies tended to have more successful procedures and have better post-procedural left ventricular function. Kaplan—Meier estimates of long-term major adverse cardiac events showed the lowest rates of events for those patients receiving both therapies, followed by those receiving a single therapy, with the highest rates of MACE in those receiving neither therapy (p<0.0001) (Abstract 035 figure 1). All individual component of MACE were lower in those receiving both therapies. Age-adjusted Cox analysis showed a decrease in the hazard of death for those receiving both therapies compared to those receiving neither (HR 0.17 (95% CIs 0.06 to 0.54) and this was maintained with multiple adjustment (HR 0.11 (95% CIs 0.02 to 0.85).



Abstract 035 Figure 1

Conclusion Prognosis after stent thrombosis is poor with high long-term event rates. Using a combined approach of mechanical thrombectomy with adjunctive GP IIb/IIIa blockade lead to effective primary PCI with improved long-term outcomes.

036 NO DIFFERENCE IN LONG-TERM MAJOR ADVERSE CARDIAC EVENT RATES BETWEEN PACLITAXEL-ELUTING AND SIROLIMUS-ELUTING STENTS

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Background Previous studies have demonstrated similar outcomes over the short to mid term in patients treated with paclitaxel-eluting stents (PESs) or sirolimus-eluting stents (SESs). However there is limited "real-world" data investigating long term outcomes. This study compared outcomes at 5 years following revascularisation in these two patient groups.