Conclusions: Manual thrombectomy reduced the incidence of myocardial re-infarction, stent thrombosis, target lesion revascularisation and rehospitalisation for heart failure. Further large scale trials are needed to determine the effect of thrombectomy on mortality.

TCT-136
Impact of Thrombectomy on Stent Thrombosis and In-Stent Restenosis after Primary PCI
Elmir Omerovic 1,2
 Sahlgrenska University Hospital, Gothenburg, Sweden

Background: The purpose of this observational study was to evaluate the impact of thrombectomy on in-stent restenosis and stent thrombosis in patients undergoing primary PCI due to ST-elevation myocardial infarction (STEMI).

Methods: Data were obtained from the SCAAR registry (Swedish Coronary Angiography and Angioplasty Registry) for PCI procedures performed in the county of Västra Götaland in Sweden between January 2005 and May 2013. The primary combined endpoint was in-stent restenosis and stent thrombosis. The study population consisted of 9058 stents that were used in 5659 procedures on 5388 patients. The two groups were compared using propensity score adjusted multilevel Cox proportional-hazards regression to account for hierarchical database. Stents were the primary observation unit, while patients and hospitals were two additional hierarchical clusters. Adjustments for differences in baseline characteristics were made with propensity score. The following variables were included in the calculation of the propensity score: age, gender, indication for PCI, smoking habits, hypertension, diabetes, dyslipidaemia, severity of coronary artery disease, previous infarction, previous PCI, coronary artery by-pass surgery (CABG), antiagulation therapy with glycoprotein Ib/IIa receptor antagonists (GP IIb/IIIa), bivalirudin, clopidogrel, ticagrelor, prasugrel, unfractioned heparin/low-molecular weight heparins (UH/LMWH), year, hospital, completeness of revascularisation, stent length, stent diameter.

Results: The two groups were balanced regarding age, gender, diabetes, smoking habits, hypertension, hyperlipidaemia, previous PCI, previous CABG. Patients who were treated with thrombectomy were more likely to be completely revascularized, pre-treated with aspirin and clopidogrel, and to receive bivalirudin and drug-eluting stents during the procedure. Mean follow-up time was 3.3 years. After adjustment, the use of thrombectomy was not associated with lower risk for stent thrombosis and restenosis (HR 1.14; 95% CI 0.81–1.63; P = 0.45).

Conclusions: In patients with STEMI, treatment with thrombectomy was not associated with decreased risk for in-stent restenosis and stent thrombosis.