A658 - Patients presenting with st-elevation myocardial infarction and high thrombus burden: the role of mechanical thrombectomy in combination with deferred stenting

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Introduction:
High thrombus burden is an independent risk factor for death and complications, including no reflow, during primary percutaneous coronary intervention (PCI) for STEMI. The aim was to investigate whether a strategy of mechanical thrombectomy in combination with deferred stenting is associated with a reduced incidence of slow- or no-reflow, and other thrombotic complications compared with stenting in patients with high thrombus burden.

Methods:
A total of 210 patients with STEMI and high thrombus burden treated with thrombus aspiration in combination with glycoprotein IIb/IIIa inhibitors with or without stent implantation. Patients were divided into 2 groups: non-stent PCI group (n = 105) and stent PCI group (n = 105). The end points were a myocardial blush grade of 0 or 1 (defined as absent or minimal myocardial reperfusion, respectively) and the postprocedural frequencies of a TIMI flow grade of 3, 48 hours after primary PCI, complete resolution of ST-segment elevation immediately after primary PCI, target vessel revascularization, reinfarction, death, and the combination of major adverse cardiac events by 30 days after randomization.

Results:
A myocardial blush grade of 0 or 1 occurred in 26.3% of the patients in the stent PCI group and in 17.1% of those in the non-stent PCI group (p < 0.05). Complete resolution of ST-segment elevation occurred in 86.6% and 78.2% of patients, respectively (p = 0.35). At 30 days, the rate of death in the stent PCI group and non-stent PCI group was 1.7%, and 1.0%, respectively (p = 0.33), and the rate of adverse events was 12.1% and 2.2%, respectively (p < 0.01).

Conclusion:
Mechanical thrombectomy in combination with glycoprotein IIb/IIIa inhibitors without stenting is applicable and effective method in a large majority of patients with myocardial infarction with ST-segment elevation and high thrombus burden. It results in better reperfusion outcomes than conventional PCI with stent, irrespective of clinical and angiographic characteristics at baseline.