

INTERVENTIONAL CARDIOLOGY

Clinical benefits of thrombectomy

A study conducted by Francesco Burzotta and colleagues, has shown that the use of thrombectomy devices as an adjunct to primary percutaneous coronary intervention (PCI) reduces adverse cardiovascular effects and all-cause mortality. Notably, the results indicated that a simple approach using manual thrombus aspiration, instead of more complicated procedures, provided favorable outcomes.

Patients with ST-elevation myocardial infarction (STEMI) treated with PCI often experience the 'no-reflow' phenomenon or failure to restore adequate tissue perfusion. Randomized trials have been conducted to determine whether perfusion could be improved by mechanically reducing distal embolization. "A series of observations suggests that thrombectomy may be more effective than distal protection to improve reperfusion," says Burzotta. The TAPAS trial, for example, showed

a survival improvement 1 year after treatment with simple manual thrombus-aspirating catheters.

Burzotta and colleagues analyzed the results of 11 randomized trials and found that thrombectomy does indeed afford clinical benefit. "This relatively novel technique is ready to enter the clinical practice of all interventional cardiologists performing STEMI interventions," says Burzotta. Future studies are aimed at developing reliable biomarker tests to identify patients most likely to benefit from thrombus aspiration. The researchers will also assess alternative strategies to improve clinical outcomes for patients in whom thrombus aspiration might not be effective.

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Original article Burzotta, F *et al.* Clinical impact of thrombectomy in acute ST-elevation myocardial infarction: an individual patient-data pooled analysis of 11 trials. *Eur. Heart J.* 30, 2193–2203 (2009).