

Mechanical Thrombectomy in ST-segment Elevation Myocardial Infarction

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Introduction: Occlusive thrombus due to ruptured or eroded atherosclerotic plaque is the most frequent substrate for ST-segment elevation myocardial infarction (STEMI). Distal embolization of intracoronary thrombus results in microvascular obstruction and compromised TIMI (Thrombolysis In Myocardial Infarction) flow. Forceful coronary injections, passage of intracoronary devices, initial balloon angioplasty and/or stenting induce distal embolization. Intracoronary thrombus additionally may contribute to vessel and stent undersizing increasing the risk of stent malapposition, in-stent restenosis or stent thrombosis.¹⁻³

Case presentation: We present an 81-year-old Caucasian male with STEMI with rapid progression to cardiogenic shock and cardiorespiratory arrest during diagnostic coronary angiography. Severe stenosis of right coronary artery (RCA) with occlusive thrombus of the left main (LM) was found. The patient received a veno-arterial extracorporeal membrane oxygenation (ECMO) device. We performed a standard percutaneous coronary intervention (PCI) of RCA and rheolytic thrombectomy (AngioJet™) of the LM. The patient was successfully weaned from ECMO 29 hours after the procedure, with no ino-constrictor support. After nine days he was fully mobilized with no neurological deficit and a 40% left ventricular ejection fraction on echocardiography.

Conclusion: Current evidence does not support the routine use of rheolytic thrombectomy in primary PCI. In specific cases that are involving large occlusive thrombus it may be a therapy of choice.

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LITERATURE

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