ボーラスでの抗凝固薬投与はSTEMI後の梗塞サイズを減少させる

INFUSE AMI:Abciximabボーラス単回投与は前壁STEMIに対しPCIを施行された患者の心筋障害サイズ軽減に役立つ可能性がある

INFUSE AMI: A bolus dose of abciximab may help reduce size of heart damage in patients undergoing PCI for anterior STEMI

STEMIに対し経皮的冠動脈インターベンション（PCI）を施行される患者に抗凝固薬abciximabをボーラス単回投与することにより30日後の梗塞サイズが減少したとのスタディ結果が2012年American College of Cardiology学会で発表され、同時にJAMAオンライン版に掲載された。INFUSE AMIスタディは左冠動脈近位部または中部の閉塞によるSTEMI発症後4時間以内に来院しプライマリPCIを抗凝固薬bivalirudinを用いて施行された患者452人を対象とした。患者らはボーラスでの梗塞領域冠動脈内abciximab局所投与またはabciximab非投与および手動での血栓吸引施行群または血栓吸引非施行群に無作為に割り付けられた。梗塞サイズは心臓磁気共鳴画像を用いて30日後に評価した。冠動脈内abciximab投与群に割り付けられた患者においてはabciximab非投与患者と比較し、総心筋量に対するパーセンテージとして計測された梗塞サイズ（中央値15.1%対17.9%）および絶対梗塞量(中央値18.7g対24.0g)が有意に小さかったが、異常壁運動スコアはそうではなかった。血栓吸引術施行群に割り付けられた患者は血栓吸引を施行されなかった患者と比較し、梗塞サイズ(中央値17.0%対17.3%)、絶対梗塞量（中央値20.3g対21.0g)、および異常壁運動スコアに有意差はなかった。

Full Text

Administration of a bolus dose of the anticoagulant drug abciximab into the coronary artery among STEMI patients who were undergoing a percutaneous coronary intervention (PCI) and also receiving another anticoagulant resulted in reduction in the size of damage to the heart muscle at 30 days, while a procedure that involved use of a catheter to remove the blood clot blocking that coronary artery did not produce these results, according to a study appearing in JAMA. The study is being published early online to coincide with its presentation at the American College of Cardiology's annual scientific sessions.

"Primary percutaneous coronary intervention (PCI) is widely accepted as the most effective reperfusion modality for ST-segment elevation myocardial infarction (STEMI). However, myocardial recovery after primary PCI is often suboptimal despite restoration of coronary blood flow, in part due to thrombus embolization resulting in impaired microvascular perfusion," according to background information in the article. Two strategies proposed to reduce this complication after PCI include bolus infusion of intracoronary abciximab and manual thrombus aspiration. "However, conflicting results have been reported as to whether intracoronary abciximab and manual aspiration thrombectomy reduce infarct size or improve clinical outcomes, in part because of differences in patient selection, devices, and study methodology."

Gregg W. Stone, M.D., of Columbia University Medical Center and New York–Presbyterian Hospital, New York, and colleague investigated whether bolus intracoronary abciximab, manual aspiration thrombectomy, or both would reduce infarct size in high-risk patients with STEMI. The study, conducted between November 2009 and December 2011, included 452 patients presenting at 37 sites in 6 countries within 4 hours of STEMI due to blockage in the proximal or mid left anterior descending artery occlusion undergoing primary PCI with the anticoagulant bivalirudin. The patients were randomized to bolus intracoronary abciximab delivered locally at the infarct lesion site vs. no abciximab and to manual aspiration thrombectomy vs. no thrombectomy. Infarct size was assessed at 30 days by cardiac magnetic resonance imaging (cMRI).

Evaluable cMRI results at 30 days were present in 181 and 172 patients randomized to intracoronary abciximab vs. no abciximab, respectively, and in 174 and 179 patients randomized to manual aspiration vs. no aspiration, respectively. The researchers found that patients randomized to intracoronary abciximab compared with no abciximab had a significant decrease in infarct size measured as a percentage of total myocardial mass (median, 15.1 percent vs. 17.9 percent) and absolute infarct mass (median, 18.7 g vs. 24.0 g), but not in abnormal wall motion score. Patients randomized to aspiration thrombectomy vs. no aspiration had no significant difference in infarct size (median, 17.0 percent vs. median, 17.3 percent), absolute infarct mass (median, 20.3 g vs. 21.0 g), or abnormal wall motion score.

"The principal findings from this multicenter, prospective, randomized trial in patients presenting early in the course of a large evolving anterior STEMI undergoing primary PCI with bivalirudin anticoagulation are as follows: (1) bolus intracoronary abciximab delivered to the infarct lesion site significantly but modestly reduced the primary end point of infarct size at 30 days; (2) in contrast, manual aspiration thrombectomy did not significantly reduce infarct size; and (3) indices of myocardial reperfusion, ST-segment resolution, and 30-day clinical event rates were not significantly different between the randomized groups," the authors conclude.

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