Primary Percutaneous Coronary Intervention (pPCI) and Fibrinolysis in Very Old Patients with ST-segment Elevation Myocardial Infarction

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Patients ≥75 years old with STEMI 6 h were randomized to pPCI or fibrinolysis. The primary endpoint was a composite of all-cause mortality, re-infarction, or disabling stroke at 30 days. The trial was prematurely stopped due to slow recruitment after enrolling 266 patients (134 allocated to pPCI and 132 to fibrinolysis). Both groups were well balanced in baseline characteristics. Mean age was 81 years. The primary endpoint was reached in 25 patients in the pPCI group (18.9%) and 34 (25.4%) in the fibrinolysis arm [odds ratio (OR), 0.69; 95% confidence interval (CI) 0.38-1.23; P = 0.21]. Similarly, non-significant reductions were found in death (13.6 vs. 17.2%, P = 0.43), re-infarction (5.3 vs. 8.2%, P = 0.35), or disabling stroke (0.8 vs. 3.0%, P = 0.18). Recurrent ischaemia was less common in pPCI-treated patients (0.8 vs. 9.7%, P 0.001). No differences were found in major bleeds. A pooled analysis with the two previous reperfusion trials performed in older patients showed an advantage of pPCI over fibrinolysis in reducing death, re-infarction, or stroke at 30 days (OR, 0.64; 95% CI 0.45-0.91).

Conclusion:

Primary PCI seems to be the best reperfusion therapy for STEMI even for the oldest patients. Early contemporary fibrinolytic therapy may be a safe alternative to pPCI in the elderly when this is not available.