1550770

Transferring STEMI patients to PCI center for Primary PCI: Is it valid approach in real world?

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Background: Patients presenting with ST elevation myocardial infarction (STEMI) undergo primary reperfusion either with thrombolysis or by primary percutaneous intervention (PCI). PCI is preferable if performed within 90 minutes from first medical contact. Hadassah Mount Scopus (HMS) is a primary care hospital without catheterization lab in which STEMI patients are transferred to Hadassah Ein-Kerem (HEK) for primary PCI, facilitated with Eptifibatide infusion. Our aim was to assess whether transferring patients to HEK is efficient and entails outcome differences. Methods: All STEMI patients admitted to HEK and HMS during 2008 were analyzed. Demographic and clinical data, time to reperfusion, in-hospital and 6 months clinical outcomes (death, recurrent MI or revascularization and stroke) were compared between two groups. Results: 128 patients with STEMI were treated in HEK of whom 38 were transferred from HMS. The baseline characteristics are presented in the table. Ten patients (26%) transferred from HMS and 23 (25.5%) who presented to HEK had evidence of spontaneous reperfusion and PCI was delayed (p= 0.86). Time from onset of pain to admission was similar in both groups while door to balloon time was significantly longer for patients admitted to HMS (figure). Mean time from HMS admission to HEK arrival was 102±59.8 minutes and mean time from HEK arrival to reperfusion was 33 minutes. Clinical outcomes were not significantly different between two groups as well as peak CPK (2,635 vs. 2,642 U/L)
Discussion: A door-to-balloon time of less than 90 minutes was achieved only in small minority of patients transferred from HMS despite good communication system between centers, short distance and short response within HEK. The outcome of transferred patients was not significantly different from those admitted directly to HEK probably due to small sample size. The policy of transferring STEMI patients for PCI must be reconsidered in view of real-world delays

Characteristic	Mount Scopus (n=38)	Ein Karem (n=90)	P value
Mean age (years)	56.1±13.1	56.6±12.3	0.74
% males	84%	87%	0.29
Smokers - n(%)	29(76%)	48(53%)	0.003
Diabetes - n(%)	9 (24%)	26 (29%)	0.21
Prior MI - n(%)	9 (24%)	21 (23%)	0.93