TCT-345
Impact of the Novel Mobile Telemedicine System in Real-time Transmission of Prehospital 12-lead ECG for ST-segment Elevation Acute Myocardial Infarction

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Background: AHA/ACC guidelines recommend prehospital 12-lead ECG for patients with acute coronary syndromes. However, transmission of prehospital 12-lead ECG to emergency department (ED) is still not spread and ECG interpretation on the prehospital and ED is not established. Therefore, we previously reported the usefulness of the mobile telemedicine system (MTS) to transmit 12-lead ECG and other parameters between moving ambulances and physicians in cardiac emergency.

Methods: We set up the MTS on an ambulance in clinical condition. Real time 12-lead ECG was transmitted together with vital signs and live video during transferring the patient by the ambulance. We assess the efficacy and usefulness of the MTS for the trage on 301 cardiovascular emergency cases from June 2008 to May 2011. During the same period, we had 441 ST-segment elevation myocardial infarction (STEMI) cases. 30 of these were used this MTS. Then, we compared various data between MTS (n=50) and non-MTS (n=391) groups with STEMI patients.

Results: We applied the MTS for 301 patients during the transfer to our ED. The mean time of using this MTS was 14±8 minutes. Of these, there were 84 patients (28%) with ACS [including 50 STEMI, 6 Non-STEMI, 26 unstable angina, and 2 recent MI]. Real-time 12-lead ECGs were checked in clinical condition and all of them were comparable to those original ECGs in the ambulance and were useful for the trage to diagnose all AMI patients before arrival at hospital and for the rapid activation of catheterization laboratory. Door to balloon time (DBT) was shorter in MTS group (median 82 minutes) compared with non-MTS group (median 110 minutes) (p=0.001).

Conclusion: Accurate real-time 12-lead ECG transfer is useful for early diagnosis and the improvement in DBT for STEMI patients.

TCT-346
ROUTINE ANGIOPLASTY AFTER FIBRINOLYTIC THERAPY FOR ST-SEGMENT ELEVATION MYOCARDIAL INFARCTION: AN UPDATED META-ANALYSIS (RAFT-STEMI)

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Background: The usefulness of a routine invasive strategy has not yet been fully established among patients with ST-segment elevation myocardial infarction (STEMI) who have initially been treated with fibrinolytic therapy, despite results of previous meta-analyses. We conducted this meta-analysis to include newer and larger trials to meta-analyses. We conducted this meta-analysis to include newer and larger trials to

Methods: We identified 7 PCI trials that enrolled 2,560 STEMI patients followed up time of using this MTS was 14±8 minutes. Of these, there were 84 patients (28%) with ACS [including 50 STEMI, 6 Non-STEMI, 26 unstable angina, and 2 recent MI]. Real-time 12-lead ECGs were checked in clinical condition and all of them were comparable to those original ECGs in the ambulance and were useful for the trage to diagnose all AMI patients before arrival at hospital and for the rapid activation of catheterization laboratory. Door to balloon time (DBT) was shorter in MTS group (median 82 minutes) compared with non-MTS group (median 110 minutes) (p=0.001).

Conclusion: Accurate real-time 12-lead ECG transfer is useful for early diagnosis and the improvement in DBT for STEMI patients.

TCT-347
The impact of symptom-to-door time and door-to-balloon time on 12-month mortality in patients undergoing primary percutaneous coronary interventions for ST-segment elevation myocardial infarction

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Background: The aims of this study were to determine the interactive effect of symptom-to-door (STD) time and door-to-balloon (DTB) time on 12-month mortality in patients undergoing primary percutaneous coronary interventions (PCI) for ST-segment elevation myocardial infarction (STEMI).

Methods: Between November 2005 and January 2008, 3,108 eligible patients (2,307 men; mean age = 61.8 ± 12.6 years-old) who had an STEMI with an STD time less than 12 hours and underwent primary PCI were analyzed from the Korea Acute MI Registry. Patients were stratified into 4 groups based on STD time (<3 versus ≥3 hours) and DTB time (<90 versus ≥90 minutes). The cutoff points for STD time and 90 minutes for DTB time were chosen after preliminary analyses of the relation between STD time and mortality and DTB time and mortality.

Results: The patients with a STD time of <3 hours and DTB time of <90 minutes had the lowest 12-month mortality (5.9%). Patients with a STD time of <3 hours and DTB time of ≥90 minutes and had significantly greater mortality than patients with an STD time of <3 hours and DTB time of <90 minutes (hazard ratio [HR] 1.866, 95% confidence interval [CI] 1.010 to 3.447, p=0.046), as did patients with a STD time of ≥3 hours and DTB time of <90 minutes (adjusted HR 1.957, 95% CI 1.040 to 3.681, p=0.037) after adjustment for clinical and angiographic variables in Cox proportional hazards model. The patients with a STD time of ≥3 hours and DTB time of ≥90 minutes had the highest 12-month mortality compared to patients with an STD time of <3 hours and DTB time of <90 minutes after adjustment for clinical and angiographic variables (adjusted HR 2.554, 95% CI 1.388 to 4.700, p=0.003), and after adjustment for clinical, angiographic, and discharge medications (adjusted HR 2.217, 95% CI 1.015 to 4.483, p=0.045).

Conclusion: This observational study suggest the combination of short (<3 hours) OTD time short (<90 minutes) DTB time are associated with the lowest 12-month mortality in patients with STEMI.

TCT-348
Temporal Trends in Treatment and Outcomes of Patients with ST-Segment Elevation Myocardial Infarction in Clinical Practice - Analysis from the PL-ACS Registry

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Background: Management of patients with non-ST-segment elevation myocardial infarction (STEMI) differs between countries and a gap still exists between guidelines and current clinical practice. These differences are also observed with time. Therefore we analyzed temporal trends in treatment and outcomes of STEMI patients in Poland.

Methods: All patients with STEMI (N = 82135), who were registered in the prospective Polish Registry of Acute Coronary Syndromes from 2004 to 2009 in 452 hospitals scattered throughout Poland were included. Follow-up mortality was obtained from the government database.

Results: Mean age was stable during 6 years. Significant increase was observed in percentage of STEMI patients receiving guidelines’ recommended treatment, both pharmacological and invasive. Median length of stay was significantly shorter in 2009 compared to 2004. As patients were more aggressively treated (rise reperfusion therapy) with time, the rates of PCI raised, the rates of thrombolysis declined, and early as well as 12-month mortality significantly decreased in the subsequent years. Of note is the increase in major bleedings.

Conclusion: This observational study suggest the combination of short (<3 hours) OTD time short (<90 minutes) DTB time are associated with the lowest 12-month mortality in patients with STEMI.