## The efficacy of automated SMS sending system for acute STEMI

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Background/Aims: Rapid reperfusion therapy is very important in acute STEMI. Recent recommended target times include <90 minutes for primary PCI (door-to-balloon time) and <30 minutes for thrombolysis (door-to-needle time). We have designed "CODE HEART activation system" using automated SMS sending system following computer interpretation of electrocardiogram within the electronic medical record system (EMR) to improve reperfusion time for acute STEMI patient and investigated the efficacy of this system. **Method:** A total of 169 patients with acute STEMI were visited to emergency room of our hospital from August 2010 through March 2013. Those patients were divided into two groups: CODE HEART not-activated group (n=84) and CODE HEART activated group (n=85). We compared differences between the two groups. **Results:** Between two groups, there is no significant difference in baseline clinical characteristics. 150 patients (88.8%) were underwent primary PCI and 19 patients (11.2%) were treated with thrombolytic agent. Door-to-balloon time is shortened (median: 55.5 min vs. 67 min, $p=0.041$) and door-to-needle time is also shortened (median: 22 min vs.46 min, $p=0.012$). Achievement rate of target reperfusion times is significantly improved (93.4% vs. 75%, $p=0.004$) after adopting the CODE HEART activation system. **Conclusions:** Automated acute STEMI alerting system via SMS seems to be useful to improve reperfusion time.
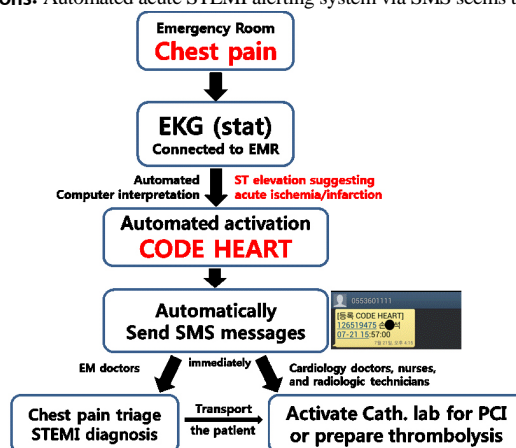
Implication of early change of Left Atrium Volume after ST elevation Acute Myocardial Infarction.

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Aim: Atrial enlargement has been suggested as a marker of the severity of diastolic dysfunction after acute myocardial infarction (AMI). The purpose of this study to assess the relationship between left atrial (LA) volume and outcome after AMI undergoing primary coronary intervention (PCI). This may be of importance when one assesses risk in patients with AMI undergoing PCI. Method : A total of 153 patients from December 2011 to June 2015 were recruited, prospective. Echocardiographic analyses were performed in 153 patients (92 male and 61 female, 63.4±11.7 years) with AMI undergoing PCI were studied at baseline and 12 months. We assessed LA volume index (LAVI) at baseline and 12 months after AMI. Result : Early change of Left atrial volume was an independent predictor of new onset atrial fibrillation or hospitalization for heart failure ($p=0.02$). In patient who survived to 12 months, LAVI increased a mean of 2.06 ± 3.01 mL/m^2 from baseline (from 25.1±7.6 to 29.0±8.1 mL/m^2, $p<0.001$). Increased LAVI group were related to low LVEF, large left ventricle systolic and diastolic dimension and large LA size. **Conclusions:** Increased LAVI is a independent predictor of new onset atrial fibrillation and hospitalization for heart failure after AMI and provides prognostic information incremental to clinical data and conventional measures of LV systolic and diastolic function.