

Impact of prehospital information for activating catheterization laboratory in patient with ST-segment elevation myocardial infarction

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Background: Door-to-balloon (D2B) time predicts survival in patients with ST-segment elevation myocardial infarction (STEMI) undergoing primary percutaneous coronary intervention (pPCI). Early activation of catheterization laboratory is vital to reduce the D2B time. **Methods:** We evaluated D2B time in 377 STEMI patients underwent pPCI between January 2008 and December 2014. During this study period, 12-leads electrocardiogram (ECG) was not taken in the emergency medical service (EMS) in our local health care system. The patients were divided into 3 groups involving, 205 patients with chest pain transported by EMS directly to our hospital without 12-leads ECG (Group E); 39 patients with chest pain walking directly into our hospital (Group W); 126 patients transported by EMS with 12-leads ECG taken by general practitioners (Group R). **Results:** No significant differences among 3 groups were shown in age, gender and the incidence of cardiogenic shock. The onset-to-door time in Group E was markedly shorter than other 2 groups. Further, the D2B time in Group E is significantly shorter than that of Group W. However, D2B time in Group E is significantly longer than that in Group R having 12 leads- ECG information. The 30-day mortality and peak creatinine kinase level were similar among 3 groups. **Conclusions:** Although the transfer with EMS directly to the hospital shows shorter onset-to-door time, it does not contribute to reduction of D2B time when under lack of information with 12-leads ECG. For further improvement with prognosis in STEMI, the prehospital 12-leads ECG taken during EMS transportation is necessary.