
To the Editor:

Bagai et al1 convincingly showed in their article that bypassing the emergency department (ED) in the United States reduces treatment times for patients with ST-segment-elevation myocardial infarction (STEMI). As part of a national effort for the improvement in STEMI treatment, one thing that contributed to this success was prehospital ECGs. One would assume that shorter treatment times translate directly into improved outcome. However, this did not occur. Astonishingly, only 10.5% of all patients actually bypassed the ED. Moreover, the mortality rate in all 12,581 patients included was rather low, with values between 2.7% and 4.1%. This also raises the question of whether all patients who would actually benefit from an early percutaneous intervention were transferred to a catheterization laboratory. No information is given on risk factors (eg, Thrombolysis in Myocardial Infarction [TIMI] risk score, patients being resuscitated before reaching the hospital or in the hospital).

In an elegant editorial, Antman2 raised the notion that a difference of 20 minutes in treatment times (from 88 minutes with ED evaluation to 68 minutes with ED bypass) was not enough and that in-hospital outcome also may not have been the right parameter (because it is too short) to study outcome.

We believe that prospectively reducing treatment times including ED bypass indeed can improve outcome. We also believe that specific tools can be implemented that help to continuously improve treatment times and outcome. We have prospectively studied 1183 patients over a time range of 15 months and used formalized data feedback as a strategy to reduce treatment times in patients with STEMI in 6 different infarction networks in the Feedback Intervention and Treatment Times in ST-Elevation Myocardial Infarction (FITT-STEMI) study.3 The feedback included quarterly meetings with all members of each network mirroring all components of the treatment times. Using this measure, we were able to improve the rate of patients who bypassed the ED from 22% to 38%. Moreover, treatment times improved, including median door-to-balloon time and contact-to-balloon time by 26 minutes. Most important, patients with primary transport and an advance notification by telephone had a feedback-related improvement in ED bypass rate from 28% to 49%, resulting in an improvement in contact-to-balloon time of 34 minutes and a decrease in mortality from 13.7% to 5.5% (P<0.05). It should be noted that all patients admitted to the hospitals with STEMI went to the catheterization laboratory and were included (intention to treat). This can be seen by a high rate of patients being resuscitated (9%) and an average TIMI risk score of 3.9. The feedback also resulted in an improvement in the rate of patients being treated within <90 minutes (door-to-balloon time) from 65% to 82%.

In conclusion, we believe that all measures have to be included in improving outcome in our patients with STEMI, as suggested by the American Heart Association, American College of Cardiology, and European Society of Cardiology.4 This should include well-established networks that closely collaborate within the network, meaning that members of percutaneous intervention hospitals should use feedback tools to give paramedics and referring hospitals the opportunity to be involved and to contribute to faster referrals bypassing the ED.

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Disclosures

None.

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