

Early Treatment Improves Heart Attack Outcomes

Heart Attack

According to a study published in *JACC: Cardiovascular Interventions*, failure to recognise symptoms of a heart attack and delay in seeking treatment for it may be associated with increased damage to the heart.

The time when a heart attack patient arrives in the emergency room until the time percutaneous coronary intervention is performed is called the door-to-balloon (D2B) time. American College of Cardiology/American Heart Association guidelines state that hospitals treating STEMI patients with percutaneous coronary intervention should do so within 90 minutes or less of the reaching the hospital. DTB was launched by the ACC in 2006 to reduce the the D2B time.

See also: [Prevalence of Silent Heart Attacks](#)

During this study, the researchers evaluated the records of 2,056 patients in the multi-center Harmonizing Outcomes with Revascularization and Stents in Acute Myocardial Infarction (HORIZONS-AMI) trial comparing patients with symptom onset-to-balloon time in three categories 1) two hours and less, 2) more than two hours to four hours, and 3) more than four hours. They compared the impact of the time it took from heart attack symptoms onset to balloon and door-to-balloon.

The findings show that blood flow was restored in the surface of the heart in approximately 90 percent of the patients. However, in one-third of patients, this was not the case. Patients who took a total of two to four hours or longer from the onset of symptoms to get treated were less likely to have their blood flow fully restored. They were also more likely to die within three years as compared to patients who were treated quickly.

Roxana Mehran, MD, a study author and director of interventional cardiovascular research and clinical trials at the Zena and Michael A. Weiner Cardiovascular Institute at Mount Sinai School of Medicine explains that these findings clearly show the need to reconsider the role of door-to-balloon as a performance metric and to examine the utility of a broader metric of systems delay.

In an accompanying editorial, Michael A. Kutcher, MD, of Wake Forest Baptist Medical Center, also points out that there is a need to pay attention to associated metrics such as symptoms and signs of onset of ischaemia. He explains that patients with prolonged symptom onset-to-balloon time are high risk patients and should be treated more assertively. There is a need to educate both the public and healthcare providers about the importance of early symptom recognition and treatment.

Source: American College of Cardiology

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