Mortality benefit of PCI over thrombolysis is shrinking

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MedWire News: The advent of modern thrombolytic techniques has significantly attenuated the mortality benefit associated with primary percutaneous coronary intervention (pPCI) over thrombolysis for the treatment of ST-segment elevation myocardial infarction (STEMI), Belgian researchers believe.

Their study, which appears in the Archives of Internal Medicine, also suggests that the target door-to-balloon time should be less than 60 minutes in order to maintain the lowest mortality rates.

Current STEMI treatment guidelines state that pPCI is the preferred strategy if it can be conducted in a timely manner by an experienced team. However, this recommendation does not take into account the introduction of newer adjunctive pharmacotherapies and routine post-thrombolysis invasive evaluation.

In this study, Marc Claeys (University Hospital Antwerp) et al therefore sought to compare pPCI with thrombolysis in the contemporary setting. They prospectively assessed mortality in 5295 STEMI patients admitted to 73 Belgian hospitals between July 2007 and December 2009.

In all, 86.4% were treated with pPCI and 13.6% with thrombolysis; of the thrombolysis patients, 83.6% subsequently underwent invasive evaluation. All management decisions were at the discretion of the treating physicians.
Compared with the thrombolized patients, those treated with pPCI had more anterior infections and were more hemodynamically compromised. Meanwhile, thrombolysis patients had a shorter ischemic time delay and tended to have less severe concomitant vascular disease. The overall TIMI risk score was slightly lower for thrombolysis versus pPCI patients (3.8 vs 4.1).

In-hospital mortality was 6.0% overall, occurring a median of 2 days after admission, and did not differ significantly between thrombolized and pPCI patients, at 6.6% versus 5.9%.

The absolute mortality benefit of pPCI over thrombolysis was driven mainly by a significant benefit in high-risk individuals. By contrast, the difference was marginal in intermediate- and low-risk patients.

Finally, in multivariate analysis, choice of treatment strategy was an independent predictor for mortality in high-risk patients (odds ratio=0.54) but not in lower-risk groups.

Commenting on their study, Claeys and co-authors say that the clinical consequences may be of particular interest to hospitals with limited urgent access to PCI facilities.

They conclude: “Our findings provide reassurance to physicians at these hospitals that treating patients according to the guidelines (ie, early administration of lytic therapy when PCI is unavailable and planning early angiography) is associated with excellent prognosis in a real-world setting.”

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