No advantage of ambulance over hospital anti-clot therapy for heart attack patients

August 29 2017

In contrast to European and American guidelines that recommend pre-hospital antiplatelet therapy for heart attack patients suffering from ST-elevation myocardial infarction (STEMI), a new study presented at ESC Congress suggests this practice has no advantage over waiting for in-hospital treatment.

"Pre-hospital administration is common practice - despite the lack of definite evidence for its benefit," said study investigator Dr Elmir Omerovic, PhD, from Sahlgrenska University Hospital, Gothenburg, Sweden.

"But our study – which is the largest cohort study conducted so far – adds to some previous evidence suggesting there is potential for harm. In fact, inadvertent prehospital administration of these drugs to patients with contraindications to antithrombotic therapy is common. Therefore, considering all current evidence, we think pre-hospital administration should be discouraged."

The retrospective study used data from the Swedish Coronary Angiography and Angioplasty Registry (SCAAR) to identify 44,804 STEMI patients undergoing percutaneous coronary intervention (PCI) - a revascularisation procedure - between 2005 and 2016.

Most of the patients were pre-treated with antiplatelet therapy, but 6,964 were not.

Comparing pre-treated patients to those not pre-treated, the investigators found no significant benefits of pre-treatment in terms of 30-day mortality (odds ratio 0.91; P=0.36), or other endpoints including measures of arterial blockage, cardiogenic shock, neurological complications, or bleeding complications.

The ESC, as well as the American College of Cardiology and American Heart Association recommend pre-hospital antiplatelet treatment, but the current study adds to growing evidence that may tip the pendulum.

The ATLANTIC trial, presented at ESC Congress a few years ago gave the first hint that pre-treatment might offer no advantages, but it was a study with relatively short delays for patients receiving in-hospital treatment, explained Dr. Omerovic.

"Our new data addresses some of the concerns with ATLANTIC and offers stronger evidence that pre-treatment is not necessary," he said. "We hope the accumulated evidence will be convincing enough to discourage this practice and trigger a change in recommendations."

Provided by European Society of Cardiology