



## LETTER TO THE EDITOR

### Primary angioplasty versus fibrinolysis in ST-segment elevation acute myocardial infarction: Reassessing the best strategy \*

#### Angioplastia primaria frente a fibrinólisis en infarto agudo de miocardio con elevación del segmento ST: reevaluación de la mejor estrategia

In the year 2006, the results published in *Circulation*, with data from the National Registry of Myocardial Infarction, showed the need for reassuring the best strategy of revascularization following an episode of acute ST-segment elevation myocardial infarction (STEMI).<sup>1</sup> Primary angioplasty improved outcomes compared with fibrinolysis in the cases of shorter needle-to-balloon time, decreasing its benefit if this elapsed time increased, especially in younger early presenters with an anterior STEMI. For the rest of settings, results with both reperfusion treatments were similar.

One concern with percutaneous coronary intervention (PCI) after successful fibrinolysis is to find the better time to carry out an interventional approach. The conclusions of the TRANSFER-AMI trial laid the groundwork to establish the most appropriate moment to perform PCI after successful fibrinolysis.<sup>2</sup> This study concluded that fibrinolysis followed by PCI within 6 h showed fewer ischemic complications than fibrinolysis alone. It is remarkable that clopidogrel was more frequently administered in the group of routine early PCI.

The interval elapsed between fibrinolysis and PCI seems to be of main importance. The FINESSE study, where the median of this time was 2.2h, did not show any benefit of facilitated PCI with abciximab or abciximab plus reteplase compared with primary PCI.<sup>3</sup> The GRACIA-2 study, where PCI was performed 3–12h after fibrinolysis, concluded that this option seems to be equivalent to primary PCI in limiting infarct size and preserving left ventricular function, although it results in better myocardial perfusion.<sup>4</sup>

The recent publication of the results of the STREAM study in *The New England Journal of Medicine* could change the medical practice in STEMI. In this work, fibrinolysis followed by PCI within 6–24h was compared with primary PCI. Fibrinolysis and primary PCI were performed at a median of 100 and 178 min after symptoms onset, respectively. An amendment made for the safety monitoring board, reducing the fibrinolytic dose to 50% in patients older than 75

years, was implemented because of an excess of intracranial hemorrhages in this age group. No differences were seen for the primary end point (a composite of death, shock, congestive heart failure, or reinfarction up to 30 days) between both groups of treatment, although patients with inferior STEMI had a lower risk for the primary end point. No differences were found for intracranial hemorrhages after protocol amendment.<sup>5</sup> However, other factors deserve a mention regarding this article. The dose of enoxaparin and loading dose of clopidogrel was reduced for patients older than 75 years, unfractionated heparin was never used and TNK was employed instead of rtPA (the usual fibrinolytic agent in earlier studies). The effects of upstream intensive antiplatelet treatment and the adjusted dose of fibrinolytics and enoxaparin for high hemorrhagic risk patients had not been previously assessed. Perhaps, the current and diverse antithrombotic combinations for STEMI treatment need to be more individualized.

## References

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