Author`s Reply

To the Editor,

I read with great interest the letter related to our manuscript entitled "The effects of tirofiban infusion on clinical and angiographic outcomes of patients with STEMI undergoing primary PCI" published in Anatol J Cardiol 2014 Dec 25. Epub of ahead of print by Kaymaz et al. (1) I am going to try to answer the long list of questions within the word count limits.

As summarized in this letter, we showed that tirofiban treatment (TRT) in addition to aspirin, high-dose clopidogrel, and unfractionated heparin prior to primary PCI significantly improves myocardial reperfusion, ST-segment resolution, in-hospital sudden cardiac death, and in-hospital all-cause mortality rates in patients with STEMI without an increased risk of major bleeding. The major limitation was the absence of prospective and randomized clinical trial designs because of the critical difficulties in the reimbursement of treatment cost. Despite this limitation, the comparison of baseline characteristics permitted us to assess the efficacy and safety issues of TRT among groups. Despite the higher TIMI risk score in the pre-PCI or upstream TRT group than in the other groups, the benefit in TIMI flow grade, corrected TIMI frame count, ST- segment resolution, in-hospital sudden cardiac death, and in-hospital all-cause mortality were also significantly higher in the upstream TRT subset than in the other subset. As I said before in my reply to first letter; our results should be considered to provide important data concerning the use of TRT combined with dual antiplatelet therapy (DAPT) including aspirin and high-dose clopidogrel, but it cannot be generalized to DAPT combinations with prasugrel or ticagrelor. Our bridging TRT was targeted to minimize the risk of intracoronary rethrombosis within the first hours of primary PCI in which the level of platelet inhibition still remains subtherapeutic because of the kinetics of clopidogrel, even with a 600-mg loading dose, and the well-known procoagulant state of STEMI.

It may not be appropriate to compare a study based on non-randomized and retrospective data with the FINESSE trial showing no appreciable benefit and only harm in starting GP IIb/IIIa inhibitors in the prehospital setting for patients treated with primary PCI (2). The comments of Jeremias et al. (3) were based on the meta-analysis of five randomized trials. They concluded that the routine use of abcix-

imab in patients with STEMI treated with primary PCI does not appear to be beneficial in those who receive pre-PCI thienopyridines (3). However, their comments are limited to five abciximab series and cannot be compared with the main results of our retrospective study in a total of 994 patients with STEMI in whom TRT was used prior to, during, or after primary PCI. Recent studies confirmed our positive results on upstream TRT (4, 5).

Intracoronary TRT was the choice in all patients of the peri-PCI TRT group, whereas only the intravenous route was used in the upstream or post-PCI TRT groups. Although the median difference in pain-to-balloon time was only 25 min between the upstream and peri-PCI TRT groups, more positive results with upstream TRT can be considered consistent with the potential benefit of earlier TRT over intracoronary injection of this drug at Cath Lab.

At the time of the enrollment, a manual aspiration catheter was not available in our center. In our opinion, "pain-to-balloon time" instead of "first medical contact-to-balloon time" seems to be a more appropriate measure for the estimation of total ischemic time, and the definition also includes the time delay from the occurrence of pain to the first medical contact. Data from angiographic and ST-segment resolution in the pre-PCI, peri-PCI, and post-PCI TRT subsets can answer your question concerning the effect of TRT on the no-reflow phenomenon. All patients with no-reflow or high thrombus burden without satisfactory ST-segment resolution underwent repeat angiography after TRT. In case of renal insufficiency, bolus TRT was not followed by infusion.

Finally, I would like to thank you for this letter, which led to a discussion concerning the use of upstream TRT as an adjunct treatment to DAPT in patients who underwent primary PCI.

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References

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