

## Response to Letter Regarding Article, "Triple Versus Dual Antiplatelet Therapy in Patients With Acute ST-Segment Elevation Myocardial Infarction Undergoing Primary Percutaneous Coronary Intervention"

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## Response to Letter Regarding Article, “Triple Versus Dual Antiplatelet Therapy in Patients With Acute ST-Segment Elevation Myocardial Infarction Undergoing Primary Percutaneous Coronary Intervention”

We thank Lin et al for their interest in our article<sup>1</sup> and for raising some concerns. They suggested that the advantage of triple antiplatelet therapy in short-term outcomes should be emphasized in higher-risk patients with ST-segment elevation myocardial infarction (STEMI) undergoing primary percutaneous coronary intervention. We totally agree with their opinion, and our article also has shown that the clinical benefit of adjuvant cilostazol was profound from the earlier period, especially within 1 month. In the subgroup analyses of our study,<sup>1</sup> we found that older (>65 years of age), female, and diabetic patients got more benefit from triple antiplatelet therapy than their counterparts who received dual antiplatelet therapy. These findings are consistent with previous studies.<sup>2</sup>

The present study showed that more patients in the triple group received glycoprotein IIb/IIIa receptor blockers than those in the dual group. But our multivariable Cox regression analysis revealed that glycoprotein IIb/IIIa receptor blockers were not an independent predictor of clinical outcomes at 8 months. In contrast to the studies by De Luca et al,<sup>3</sup> which enrolled randomized trials using abciximab as adjunctive therapy to reperfusion in acute STEMI, our study came from a prospectively designed registry reflecting real-world clinical practice in the era of drug-eluting stents. Currently, only abciximab is commercially available in Korea, and we suppose the inconsistent use of glycoprotein IIb/IIIa receptor blockers might have influenced their efficacy in the present study. However, we used a propensity score-adjusted multivariable Cox regression analysis, which contained glycoprotein IIb/IIIa receptor blockers as a coanalytic factor, and our results showed that the adjunctive cilostazol remained beneficial independently from other confounders.

As Dr Lin and colleagues have mentioned, the coadministration of calcium channel blockers is associated with decreased platelet inhibition by clopidogrel.<sup>4</sup> Angiotensin-converting enzyme inhibitors may attenuate the antiplatelet effects of aspirin.<sup>5</sup> We agree that the interactions between these 3 drugs may exist. However, in the present study, patients in the triple group were more likely to receive angiotensin-converting enzyme inhibitors, whereas they were less likely to receive calcium channel blockers. Therefore, the interactions might have been offset by the inverse use of angiotensin-converting enzyme inhibitors and calcium channel blockers between the 2 compared groups. Furthermore, the propensity score-adjusted multivariable Cox regression analysis might have helped us minimize these interactions.

The concerns relative to stent thrombosis had not been proposed at the end of 2005 in the Korea Acute Myocardial Infarction Registry. Thus, when we initiated the Korea Acute Myocardial Infarction Registry study, stent thrombosis wasn't recorded. However, when the issue of stent thrombosis with drug-eluting stents was raised at the end of 2006, we started to record stent thrombosis and associated clinical events. Therefore, in the Korea Acute Myocardial Infarction Registry study, only half of the patients have stent thrombosis information. In the present study, because we enrolled all of the patients who underwent primary percutaneous coronary intervention with drug-eluting stents, we could not calculate the exact incidence of stent thrombosis. We are planning to carry out a randomized clinical trial to clarify the optimal duration and mechanisms of benefit from triple antiplatelet therapy. We hope our further study can answer the concerns of Dr Lin et al.

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## Disclosures

None.

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