

Clinical Impact of Dysglycemia in Patients with an Acute Myocardial Infarction (*Diabetes Metab J* 2021; 45:270-4)

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We would like to thank Professor Kim for the interest in and comments regarding our study entitled, “Clinical impact of dysglycemia in patients with an acute myocardial infarction,” which was published in *Diabetes and Metabolism Journal* [1].

In our study, severe hyperglycemia (Group 5, >260 mg/dL) among acute myocardial infarction (AMI) patients was associated with a greater 30-day mortality in nondiabetics than in diabetics. A higher blood sugar level despite a lack of diabetes can indicate more extensive and serious myocardial damage based on higher troponin I and aspartate aminotransferase levels. I agree with your explanation regarding ‘paradoxical resistance’ of diabetic hearts to ischemia, which also can be explained by ‘ischemic preconditioning (IP)’ in diabetics. IP is the mechanism of protection in the heart in which ischemia paradoxically protects the myocardium against other ischemic insults [2,3].

As our study had different cut-off values for predicting 30-day mortality between diabetics and nondiabetics (208.5 and 174.5 mg/dL, respectively), I also agree with your suggestion that the optimal glucose level may vary between diabetic and non-diabetic patients with AMIs.

In a previous study about admission glucose level and mortality in the Korea Acute Myocardial Infarction Registry, hypoglycemia upon admission in AMI patients was related to a higher 30-day mortality [4]. Higher N-terminal pro-B-type natriuretic peptide level and E/E ratio in the hypoglycemia groups could be expected to be a poor prognosis; however,

those results could not be represented in the hypoglycemia groups because of the limited number of patients in our study. Further, it was difficult to assess the relationships between hypoglycemia and myocardial injury and dysfunction.

We would like to thank Professor Kim again for the valuable comments on our findings. The noted limitation of our study will be identified through follow-up research to be conducted later.

CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

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Hypoglycemia at admission in patients with acute myocardial infarction predicts a higher 30-day mortality in patients with

poorly controlled type 2 diabetes than in well-controlled patients. *Diabetes Care* 2014;37:2366-73.