Glucose-Insulin-Potassium Use in Acute Myocardial Infarction

To the Editor:

I read with interest the study of Diaz et al.1 regarding the ECLA Glucose-Insulin-Potassium Pilot trial. The provocative conclusions may potentially affect the care of patients with acute myocardial infarction (MI) and need to be substantiated by larger randomized trials, as the authors of both the study1 and the accompanying editorial2 have suggested. In addition, several aspects of the ECLA study need to be clarified in order to understand the results and design future studies.

I believe it is reasonable for a pilot study to select patients with suspected acute MI, regardless of ECG findings. However, it is prudent to report detailed initial ECG findings. Both Tables 1 and 2 include the percentage of patients with anterior MI, but this is not defined; it may be acute ST elevation, non–Q-wave MI, or subsequent Q-wave MI. Survival differences between MI with and without ST elevation have been reported by many well-designed large studies.3 Both Tables 1 and 2 include time from symptom onset to treatment. It is not stated whether this reported time is for initiation of GIK solution or reperfusion therapy. Time to treatment is a fundamental variable that influences outcome. This is particularly true for reperfusion therapy. Some of the observed differences among the groups may be due to time differences in treatment with reperfusion thrombolytic therapy.

Other data of importance include the criteria used by the authors for the diagnosis of MI, peak creatine kinase levels for each group, and ejection fraction. The effect of aspirin, β-blocker, and ACE inhibitor use in acute and post-MI care is very well established, yet the article is devoid of the utilization rate of these important therapies. In addition, an analysis of the effect of diabetes mellitus would be helpful, because the DIGAMI study4 showed that diabetes mellitus was an important factor in the use of GIK.

This important study will be more useful when these pertinent variables are included and analyzed. One may assume that randomization has evenly distributed these variables. However, randomization may not have distributed these evenly, as evidenced by the fact that smoking and family history were significantly different between the groups.

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