LETTER TO THE EDITOR

Prognostic Value of Fragmented QRS on Admission in Non-ST-Elevation Myocardial Infarction

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To the Editor,

We read with interest the recent study on prognostic impact of fragmented QRS (fQRS) in patients with non-ST-elevation myocardial infarction (NSTEMI), which enrolls a considerably large number of patients.[1] A few points need to be mentioned about this study. The study excluded patients with complete/incomplete bundle branch blocks but mean QRS duration was still 103.0 ± 20.7 milliseconds in patients with fQRS, meaning that incomplete bundle branch cases were enrolled. Twelve patients with left bundle branch block were also included. Patients with fQRS expectedly had higher GRACE score, lower left ventricular ejection fraction (LVEF), and more frequently had history of coronary artery disease. On the other hand, only 65.9% of them underwent coronary angiography, which was less than 82.2% in those without fQRS (which apparently consisted of lower-risk patients). Moreover, no data were provided regarding the method of revascularization, if any, for either group. Current guidelines recommend coronary angiography for NSTEMI patients deemed at high risk.[2] The concern is some patients may not have received appropriate treatment and revascularization due to patients' refusal of invasive strategy, contraindications to angiography, or unsuitable coronary anatomy for revascularization. Providing data regarding revascularization would have helped in interpretation of mortality at follow-up to avoid bias.

LVEF has been shown to correlate with mortality at follow-up in patients with acute coronary syndromes.[3] LVEF has additive prognostic value over TIMI score[3] and was the most powerful predictor of 6-month major event in patients with NSTEMI.[4] Surprisingly, LVEF does not associate with mortality in this report.

The only reported outcome at follow-up is mortality and other major cardiac events such as readmission, reinfarction, and the need for repeat revascularization are not reported. Long-term outcomes in NSTEMI are often applied to studies reporting follow-up of more than 2 years and midterm mortality suits better when the follow-up is 1 year.[5] Finally, from the statistical point of view, Kaplan-Meier is most suited to examine the role of a factor in time-to-event (survival) in univariate analyses and Cox regression model for multivariate analyses. None of these tests were used for reporting the follow-up survival outcome in this study.[6]

REFERENCES

1. Bozbeyoglu E, Yildirimturk O, Yazici S, et al. Fragmented QRS on admission electrocardiography predicts long-term mortality in patients with non-ST-segment elevation myocardial infarction. Ann Noninvasive Electrocardiol 2016;21:352–357.
2. Amsterdam EA, Wenger NK, Brindis RG, et al. 2014 AHA/ACC guideline for the management of patients with

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non-ST-elevation acute coronary syndromes: Executive summary: A report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. Circulation 2014;130:2354–2394.
3. Richards AM, Nicholls MG, Espiner EA, et al. B-type natriuretic peptides and ejection fraction for prognosis after myocardial infarction. Circulation 2003;107:2786–2792.
4. Bodi V, Sanchis J, Llacer A, et al. Prognostic markers of non-ST elevation acute coronary syndromes. Rev Esp Cardiol 2003;56:857–864.
5. Clemmensen P, Roe MT, Hochman JS, et al. Long-term outcomes for women versus men with unstable angina/non-ST-segment elevation myocardial infarction managed medically without revascularization: Insights from the TaRgeted platelet Inhibition to cLarify the Optimal strateGy to medicallY manage Acute Coronary Syndromes trial. Am Heart J 2015;170:695–705.e5.
6. Goel MK, Khanna P, Kishore J. Understanding survival analysis: Kaplan-Meier estimate. Int J Ayurveda Res 2010;1:274–278.