

Limitations and Future Directions for Risk Assessment of Ventricular Arrhythmia in Acute Myocardial Infarction [Letter]

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Dear editor

The article titled “A New Scoring System for Predicting Ventricular Arrhythmia (VA) Risk in Patients with Acute Myocardial Infarction (AMI)” by Sun et al has piqued our interest.¹ The objective of the study was to develop a risk score for predicting the occurrence of VA during hospitalization in patients with AMI. The study identified several independent predictors of VA, including a Killip grade of ≥ 3 , STEMI patients, LVEF of $<50\%$, frequent premature ventricular beats, a serum potassium level of <3.5 mmol/L, the presence of type 2 diabetes, and elevated creatinine levels. The authors concluded that the novel VA prediction model is user-friendly and has high predictive performance, making it a valuable tool for clinical decision-making. We would like to express our sincere appreciation to the authors for their meticulous research and valuable insights, which have significantly advanced our understanding of predicting VA in patients with AMI.

Although the novel prediction model displays promise for risk stratification of VA in patients with AMI, it is imperative to acknowledge potential limitations. One such limitation is the exclusion of patients who undergo early implantation of implantable cardioverter-defibrillators, which may lead to selection bias and an inaccurate estimation of the prognostic prediction model's true effect. Careful consideration of the potential impact of selection bias is crucial when interpreting study results, as this exclusion may skew the study sample towards patients with varying disease severity and outcome probabilities.

To address these limitations, future research should employ a prospective design and focus on developing multi-dimensional risk assessment tools to minimize morbidity and mortality in patients with AMI. These tools should incorporate clinical variables, genetic, biochemical, and imaging markers, to enable a more comprehensive assessment of risk.²⁻⁴ By utilizing such tools, clinicians may be able to identify high-risk patients at an early stage and provide appropriate interventions, which could potentially improve patient outcomes.

Disclosure

The authors report no conflicts of interest in this communication.

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