TEMPORAL CHANGES
IN SCD PREDICTORS

Individuals who experience myocardial infarction (MI) are at particular risk of sudden cardiac death (SCD) in the first month after MI; however, success in reducing all-cause mortality in this time period has been varied. New evidence from Jonathan Piccini and coworkers suggests that predictors of SCD change with time following MI, highlighting the need to reassess risk stratification guidelines for SCD. “While many risk factors for SCD have been described, little is known about whether and how predictors of SCD vary with time after MI,” explain the authors.

In a *post hoc* study, the researchers analyzed incidence of SCD in 11,256 patients who had experienced acute MI and were enrolled in the Valsartan In Acute Myocardial Infarction Trial (VALIANT). Over 3 years of follow-up, the investigators noted an 8.6% cumulative incidence of SCD in participants but, crucially, factors associated with SCD changed considerably depending on time elapsed following the initial MI.

Before discharge from hospital, impaired creatinine clearance and increased heart rate strongly predicted SCD, while increased heart rate, initial left ventricular ejection fraction <40%, and atrial fibrillation were more reliable predictors of SCD in the first month after MI. Furthermore, the association between left ventricular ejection fraction—the current gold standard for risk stratification of SCD—and SCD was greatest at 6 months after MI.

Although post-MI atrial fibrillation was associated with an increased risk of SCD throughout the follow-up period, the investigators stress that baseline clinical characteristics were less useful to predict SCD as time passed. “These findings have important clinical implications, since current risk stratification systems for SCD are static and do not incorporate time elapsed after MI,” conclude the researchers.

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Original article Piccini, J. P. *et al.* Predictors of sudden cardiac death change with time after myocardial infarction: results from the VALIANT trial. *Eur. Heart J.* doi:10.1093/eurheartj/ehp425