Response to Letter Regarding Article, “Prolonged Tpeak to Tend Interval on the Resting Electrocardiogram Is Associated With Increased Risk of Sudden Cardiac Death”

We appreciated hearing from Opthof and colleagues regarding our recently published paper from the Oregon Sudden Unexpected Death Study, with the observation that prolonged Tpeak-Tend interval (TpTe) from the 12-lead ECG is an independent predictor of sudden death in the general population.1 Clearly, the first report of such an association will not establish a place for any given predictor in the sudden death risk stratification repertoire. This always requires validation in separate populations as well as additional evaluation in more focused clinical investigations. Fortunately, the earlier study that Opthof and colleagues refer to does not pre-empt such a role for this interesting variable measured from a widely available and inexpensive test.2 Given the objective, design, end point (overall mortality), and, most importantly, method of measurement of TpTe using the averaging of multiple computerized algorithms, the results of this prior study may not be conclusive.2 Therefore, TpTe warrants further evaluation before it can be either adopted or dismissed as a risk marker of sudden death in the community.

We thank Opthof and colleagues for their important reminder of the vigorous debate surrounding the genesis of TpTe. Clearly there is evidence for either increased transmural dispersion of repolarization3 or total (regional) dispersion of repolarization4 reflecting as prolongation of TpTe. We regret our oversight in attributing the first potential mechanism to Opthof and colleagues instead of the second; this was unintentional. Given the unquestionable wisdom and eminence of the debating groups, it is neither our place nor our role to act as arbiter. However, we are intrigued by the significant and active interest that this simple 12-lead ECG measurement continues to generate in the field and look forward to learning more, especially because there is a potential role for Tpeak-Tend interval in future risk stratification strategies for prevention of sudden cardiac death.

Disclosures

None.

References


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Ragesh Panikkath, Kyndaron Reinier, Audrey Uy-Evanado, Carmen Teodorescu, Jonathan Hattenhauer, Ronald Mariani, Karen Gunson, Jonathan Jui and Sumeet S. Chugh

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