Response to Letter Regarding Article, “Prevalence and Prognostic Significance of Abnormal P Terminal Force in Lead V1 of the Electrocardiogram in the General Population”

Chhabra et al bring into question important remarks regarding our results on the association of P terminal force (PTF) and mortality. First, in their letter, they recall that PTF is strongly affected by the placement of lead V1. During the data collection of our study, the electrocardiograms were recorded by specifically trained personnel and a strictly standardized protocol was used making misplacements of the leads unlikely.

They also bring up that chronic lung diseases, especially the ones causing emphysema, influence the depolarization vectors of the atria, thus affecting the PTF. They also point out that totally negative P waves were common among emphysematous patients in their study and note that emphysema/chronic lung disease was not accounted in our study, which may have played a confounding role in the relationship between the PTF and mortality. We completely agree with these important points, but we comment that PTF was measured also from totally negative P waves in lead V1 in our study. To review their concerns, we decided to rerun the Cox proportional hazards model assessing the relationship of PTF and mortality among nonsmokers (n=7005) because smoking is the most common cause of chronic lung disease and emphysema in the general population. The univariate model yielded slightly higher hazard ratios as the ones in the whole population; the hazard ratios for mortality being 1.48 (95% confidence interval, 1.29–1.70; P<0.001), 2.15 (95% confidence interval, 1.75–2.66; P<0.001), and 3.23 (95% confidence interval, 2.58–4.06; P<0.001) for PTF groups 0.04 to 0.05 mm·s (n=360), 0.05 to 0.06 mm·s (n=120), and >0.06 mm·s (n=86), respectively. However, the hazard ratio in the multivariate model for subjects presenting PTF >0.06 was slightly smaller (1.52; 95% confidence interval, 1.20–1.91; P<0.001). Generally, the results remained largely the same, suggesting that subjects in whom PTF was caused by rotation of the heart as a result of lung disease rather than left atrial abnormality had only a minor impact on our results.

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Disclosures
None.

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