LETTER TO THE EDITOR

Electrocardiograms in African Americans and Non-African Americans Presenting with Takotsubo Syndrome

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Dear Editor,

I read with interest the report by Franco et al.,¹ published online ahead of print on January 18, in the Journal, about the differences in the electrocardiogram (ECG) on presentation with Takotsubo syndrome (TTS), between 52 African Americans (AA) and 47 non-African Americans (non-AA). The authors found that T-wave inversions in AA patients were frequent in both limb and precordial leads, whereas T-wave inversions in non-AA were limited to precordial leads; T-wave inversion was more prevalent on presentation among AA patients, whereas ST depression was more common among non-AA; also the average QTc upon presentation in AA was longer than non-AA as was the maximum average QTc during index hospitalization.¹ Although data were collected on QRS amplitude,¹ such information was not presented in the study; this is discussed in light of recent reports describing low-voltage QRS complexes in the admission ECG, or transient attenuation of the QRS complexes, based on serial subsequent ECGs in patients with TTS.^{2,3} As the authors evaluated ECGs collected upon admission, at 24 and 48 hours, at discharge, and prior to the index event when available,¹ they may be able to enlighten us about the above. There is no information about the number of patients on whom the authors managed to secure an ECG, recorded prior to the index event.¹ Although all patients developed symptoms within 12 hours of

recording initial ECGs, I was wondering whether there was a difference in the time interval between the onset of the illness and the recording of the first ECG between AA and non-AA, which could explain the more frequent presence of the T-wave inversions in AA, as T-wave inversions usually follows ST-segment deviations in TTS (i.e., did the AA present later than non-AA after the inception of the illness?). In reference to the QTc intervals, is it possible that the manual (I presume) measurements of QT intervals favored (in terms of length) patients with more clearly inscribed or deeper T waves seem in AA versus the shallow T waves with indistinct T-wave offset in the non-AA. Are there automated QTc measurements available to corroborate the manual measurements? The longer QTc interval in AA than in non-AA upon presentation¹ is puzzling and bespeaks of a later presentation to the hospital of the former, as prior work has shown that the QTc interval in both men and women AA is either shorter^{4,5} or no different for whites.^{6–8} However, this does not explain why the maximum achieved QTc during the index hospitalization¹ was longer in the AA than in the non-AA, and this will require confirmation in future studies of AA and non-AA patients with TTS.

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