To The Editor:
I read with great interest the contribution by Suzuki et al, published online on November 28, 2013 ahead of print in the Journal, about the assessment of cerebral blood flow (CBF) in 3 consecutive patients with Takotsubo syndrome (TTS) and at follow-up, when myocardial function had recovered. This is the first evidence that CBF, and indirectly brain activity, is enhanced in the acute phase of TTS in the hippocampus, brainstem, and basal ganglia, and decreased in the prefrontal cortex, with partial normalization of these changes at follow-up. This is welcome news for the TTS field, which needs to be directed towards exploration of the brain-heart connection.

The authors remarked that “the number of voxels with significant CBF decrease was comparable between the 2 phases, whereas that with significant CBF increase was significantly decreased in the chronic phase”. Does this decreased CBF of the prefrontal cortex and the lingering partially increased CBF to the hippocampus, brainstem, and basal ganglia in the follow-up study constitute the “baseline” of such patients who indeed live in a constant state of heightened arousal, and thus perhaps are destined to develop TTS when they are exposed to stress, or it takes more than a month, for patients who have suffered TTS, to have their CBF return to normal? A third assessment of CBF in the 3 patients of this study at a later time may provide some insights on this differential. In the meantime, this pivotal study opens a new avenue for thinking and experimental ventures. Accordingly, one wonders about the following issues. (1) How specific are such brain regional activations/deactivations in TTS, as compared to other stressful states without TTS? (2) Could they be useful as warning signs, or for the follow-up of patients who have suffered TTS? (3) Could they be used for monitoring treatment based on drugs, or cognitive therapy? (4) Could they prompt implementation of echocardiography, with a low threshold, for the detection of milder forms of TTS, which are conceivably common? (5) Could animal models of TTS be designed for further elucidation of this brain-heart connection? It may be time for psychiatrists, neurologists, and cardiologists ("neurocardiologists") to partner in managing and studying this mysterious affliction.

Disclosures
Conflict of interest: None.

References

John E. Madias, MD
Icahn School of Medicine at Mount Sinai, New York, NY; The Division of Cardiology, Elmhurst Hospital Center, Elmhurst, NY, USA
(Released online January 16, 2014)