Posttraumatic Stress Disorder After Cerebrovascular Events
Broadening the Landscape of Psychological Assessment in Stroke and Transient Ischemic Attack

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Posttraumatic stress disorder (PTSD) is defined based on exposure to actual or threatened death, injury, or violence and the presence for ≥30 days postevent of intrusive symptoms (eg, flashbacks), persistent avoidance of stimuli, negative alteration in mood and cognition, and marked alteration in arousal and reactivity (eg, hypervigilance). Although diagnostically distinct, PTSD symptoms overlap with symptoms of depression and anxiety, making it complex to evaluate the unique associations between these different conditions and their contribution to disease trajectory or outcome. In patients with cerebrovascular disease, depression and anxiety have been much more frequently investigated than PTSD, with prevalence estimates for these conditions typically ranging from 20% to 30% in the poststroke period, leading to recommendations to screen all stroke patients for depression in the early poststroke period. A sprinkling of studies of mixed populations of both stroke and transient ischemic attack (TIA) patients have reported estimates of PTSD ranging from 10% to 25%, with higher prevalence estimates when based on self-rated measures than by interview. While evidence-based interventions for PTSD after more traditional traumatic precipitants exist, these limited data in stroke or TIA have not been sufficient to support routine PTSD awareness, screening, diagnosis, or management activities after cerebrovascular events.

The prospective, cross-sectional study of Kiphuth and colleagues used the Posttraumatic Stress Diagnostic Scale, a self-rated symptom measure that maps onto DSM criteria, to assess PTSD occurrence at 3 months after TIA. Findings were an 10x higher occurrence of PTSD (=29.6%) at 3 months after TIA relative to the general population prevalence in Germany; even if all those lost to follow-up were projected to not have PTSD, the estimated prevalence (15%) was still 5x that of the general population. Co-occurring depression and anxiety symptoms were common in those who were classified as having PTSD. Further, PTSD at 3 months post-TIA was associated with maladaptive coping, higher perceived risk of stroke, and aspects of health-related quality of life, but not with knowledge about stroke.

There is a relatively robust literature on PTSD after a variety of acute medical events, so it is not clear if PTSD after TIA or stroke is a different phenomenon than what might be seen with other acute healthcare-related situational stressors. The occurrence of PTSD post-TIA in the present study is consistent with PTSD prevalence after cardiac events, intensive care unit admissions, and other stressful medical events. A recent review of research on PTSD after acute coronary events emphasized that although a range of patient factors have been associated with PTSD onset after these events, external and modifiable systems-level factors also appear to be at play, for example, greater emergency department crowding. Importantly, a pooled meta-analysis reported that a positive PTSD screen after acute coronary syndrome was associated with a doubling of the risk of a subsequent event, either recurrent cardiovascular event or death, raising the possibility for significant adverse outcomes for cerebrovascular patients, as well.

Although the specificity of the association between TIA and PTSD is not fully understood, the study in this issue of Stroke raises awareness that TIA may fairly commonly initiate or exacerbate bothersome psychological symptoms after the event that are independent from any change in physical function. This finding is clinically important because psychological symptoms after stroke and TIA are known to be associated with adverse outcomes, including increased risk of subsequent vascular events and mortality. It will be critical to explore the mechanisms mediating any associations of PTSD and stroke or TIA outcomes; for example, one study of PTSD and stroke patients found that poststroke self-reported medication nonadherence was 67% among those screening positive for PTSD, compared with 35% for those without PTSD symptoms, according to the checklist that was administered. Future work should include larger prospective, longitudinal cohort studies that include diagnostic measures of PTSD, depression, and anxiety poststroke to elucidate the unique influence of these conditions on patient outcomes and modifiable factors mediating those associations and to provide guidance on application of existing evidence-based interventions that are tailored to specific, clinically predominant symptoms.

Disclosures
None.

References


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