

## Suicide Risk-Assessment in Patients With Primary Progressive Aphasia

*To the Editor:* Primary progressive aphasia (PPA) is a neurodegenerative disease initially characterized by an isolated and gradual impairment of language.<sup>1</sup> The age at onset ranges from the 40s to 80s.<sup>2</sup> There is no single type of language impairment that is pathognomonic for PPA. The aphasia can be nonfluent (deficits in expression) or fluent (deficits in comprehension).<sup>1</sup> The illness usually starts with difficulty in word-finding (anomia) and proceeds to impair the comprehension (semantics) of language.<sup>1</sup> Other mental domains, including cognition and behavior, are possibly affected after the first few years, but language impairment remains the most significant part throughout the course of illness.<sup>2</sup> Literature has explored the relationship of PPA with neuropsychiatric illnesses such as dementia and depression; however, the association between PPA and suicide risk has not been investigated. We present a patient with PPA who attempted suicide, and we discuss the risk factors of suicide in PPA patients.

### Case Report

The patient is a 57-year-old married woman without previous psychiatric history, who was diagnosed with PPA by a neurologist after she developed progressive language impairment. Her symptoms started with difficulty in verbal expression, while comprehension of both spoken and written language was intact. Over the next 6 years, her speech output was significantly decreased,

and her comprehension was delayed. She lived with a supportive husband and maintained her social life, including attending family functions and church worship. She developed her first episode of depression, manifested by poor appetite, social isolation, and self-neglect. This was succeeded by a period of unrelenting restlessness, evidenced by pacing the house and episodes of inconsolable weeping. She then attempted to end her life by running into traffic, which led to her first lifetime psychiatric admission. Her medical history was notable for well-controlled hypertension, and she had no family history of psychiatric illness. She did not have a history of substance abuse. She had difficulty conveying information, despite her efforts, but was able to respond to questions related to depressive symptoms and her suicidal attempt by nodding her head or giving yes/no after a delay. She did not endorse any suicidal behavior inside the hospital. She was oriented to self and her family, and she was not psychotic. Head CT was unremarkable. Her depression was successfully treated with venlafaxine XR 225mg/day. She had no further restlessness or weeping episodes. She was discharged to her family and provided with home health-aide services.

### Discussion

Our patient attempted suicide 6 years after being diagnosed with PPA, in the context of worsening language deficits and depression. She had a number of protective factors from suicide; these included family support, religious involvement, no additional chronic medical illness other than hypertension, and no personal and family history of psychiatric illness or substance use

disorders. However, her debilitating language impairment was a severe enough stressor to lead this patient to attempt suicide.

Suicidality in PPA patients is an intricate issue, in part because its psychological assessment is quite challenging in patients with language deficits. Fortunately, other perspectives of suicide, including the biological and social influences, can be more easily estimated in these patients. The evaluation of demographics (age, gender, race, marital status) and relevant history (depression, previous suicide attempts, substance use disorders, access to means, family history of suicide) remain important. In a cross-sectional study of 61 patients with PPA, one-third experienced depression, and the number of depressive symptoms correlated with the extent of language impairment.<sup>3</sup> Although suicide was not examined in this study, depression is known to be a significant risk factor for suicide. It is reasonable to propose that the risk of suicide may be associated with the degree of language deficits in PPA patients.

Furthermore, type of aphasia may affect the risk for suicide. Patients with nonfluent aphasia develop intense feelings of frustration when they are unable to express their thoughts despite intact comprehension, in contrast to those with fluent aphasia, who have difficulty comprehending spoken language and fail to realize their deficits.<sup>4</sup> Hence, patients with nonfluent aphasia may have a higher potential for suicide.

In summary, the complexity of suicide assessment in PPA patients is due to their inability to verbalize

thoughts. Severity of language deficits and type of aphasia may place the patients at an increased risk for suicide, but their influence appears to be mediated by depression. It is essential to identify and reinforce the protective factors that counteract suicide in an individual patient. These include, but are not limited to, a well-integrated social support network, religious affiliation, effective coping strategies, and enhancement of care at home.

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