

Prevalence of Suicidality in Focal and Generalized Dystonia

A Critical and Unrecognized Problem

Kirsten E. Zeuner, MD, and Jay A. van Gerpen, MD, MPhil

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Correspondence

Kirsten E. Zeuner
k.zeuner@
neurologie.uni-kiel.de

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Suicidal Ideations and Attempts in Patients With Isolated Dystonia

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Several studies have emphasized the importance of neuropsychiatric abnormalities in idiopathic dystonia.^{1,2} Anxiety, depression, and obsessive-compulsive disorders are the most common ones. Psychiatric disorders may begin 18.4 ± 13.9 years before the onset of motor symptoms, and in 1 focal dystonia study, they were present in 57.3% of patients.³ The reported prevalence, however, may vary according to the type of focal dystonia. With cervical dystonia, 25.3% to 83.6% of patients will have a psychiatric disorder at some point in their lives; in blepharospasm, 67.7% to 71%; and in spasmodic dysphonia, between 37% and 42%.² Most studies reveal no correlation between the severity of dystonia and a psychiatric disorder, raising the possibility that the high prevalence of lifetime psychiatric comorbidity might be a primary rather than a secondary phenomenon in focal dystonia.^{1,4} In addition, results of some generalized dystonia studies suggest that major depressive disorders may not arise primarily from motor disability but rather are linked to the DYT1 dystonia mutation.⁵ Neuropsychiatric disorders in dystonia significantly affect quality of life, which correlates with depression and anxiety.^{1,2} Although the prevalence of neuropsychiatric disorders in dystonia is greater than in age- and sex-matched controls, the risk and the incidence of suicidal behavior among patients with dystonia have not been investigated.

This issue of *Neurology*® contains the results of work by Worthley and Simonyan⁶ in which they used an anonymous, online 97-question survey, completed by 542 patients with isolated dystonia, to assess the prevalence and risk of suicidality compared to the prevalence of suicidal ideation and attempts in the general population. Suicidal ideation refers to any thoughts about committing suicide, whereas a suicide attempt is an unsuccessful act to end one's life with self-directed, injurious behavior. The authors recruited their subjects from their database containing verified diagnoses of isolated dystonia and through existing patient registries of the Dystonia Research Medical Foundation and the National Spasmodic Dysphonia Association. The survey was available through the Dystonia Medical Research Foundation for 8 weeks, reaching 3,138 patients, among whom 542 completed it. Of these, 424 patients had focal dystonia, 63 had multifocal/segmental dystonia, 54 had generalized dystonia, and 1 had hemidystonia. Tremor occurred most frequently in generalized dystonia (74.1%) followed by multifocal/segmental dystonia (61.9%), other forms of focal dystonia (55.9%), and laryngeal dystonia (45.7%). A large majority of patients (95.6%) received treatment, including botulinum toxin injections, oral medications, or deep brain stimulation, depending on the type of dystonia.

The investigators computed the ratio of dystonia-induced to non-dystonia-induced suicidality and of suicidal ideation to suicide attempts in patients who reported suicidal behavior. Compared to the general global population, for which the lifetime prevalence rate is 9.2% for suicidal ideation and 2.7% for suicide attempts, the rate of suicidality in dystonia was 32.3% and particularly high in generalized forms. The subgroup analysis of suicidal ideation displayed the following results: generalized dystonia 50.0%, multifocal/segmental dystonias 46.0%, focal dystonias 33.3%, and laryngeal dystonia 26.1%. Overall, 16.6% of patients with suicidal ideation attempted suicide, and this ratio was 4:1 in those with generalized dystonia. Of the latter, 80%

From the Department of Neurology (Z.E.Z.), Kiel University, Germany; and Department of Neurology (J.A.v.G.), University of Alabama at Birmingham, Huntsville. Go to [Neurology.org/N](https://www.neurology.org/N) for full disclosures. Funding information and disclosures deemed relevant by the authors, if any, are provided at the end of the editorial.

answered that their suicide attempt was brought on by their dystonia. The incidence of a lifetime suicidal attempt was lower (ranging from a 5:1 to 10:1 ideation-to-attempt ratio) in multifocal or laryngeal dystonia, although the ratio of attempts attributed dystonia was higher, at 4:1 to 5:1, depending on the form of dystonia. In contrast, patients with other forms of focal dystonia had a 4:1 incidence of lifetime suicidal ideation-to-attempt ratio, although surprisingly only an 8:1 ideation-to-attempt ratio, specifically related to dystonia. There was a positive correlation between suicidal ideation and a history of a psychiatric disorder such as depression, generalized anxiety, panic disorder, and social anxiety.

Worthley and Simonyan emphasize that the risk for suicidal behavior is increased 3.5-fold in dystonia, with patients with generalized and multifocal dystonia having the greatest risk. The authors conclude that not only does disease severity play a role in this risk but additional endogenous factors may as well. Depression and anxiety disorders are frequent in dystonia, are strongly associated with suicidal behavior, and may contribute to the suicidality rates across all forms. Worthley and Simonyan strongly recommend that suicide risk screening be incorporated into the routine clinical evaluation of patients with dystonia.

There are several limitations to this study. First, among the group with focal dystonia, the distribution of patients was skewed toward laryngeal dystonia (laryngeal dystonia $n = 322$, cervical dystonia $n = 57$, focal hand dystonia $n = 29$, craniofacial dystonia $n = 11$, lower limb dystonia $n = 4$, abdominal/truncal dystonia $n = 1$). However, the authors acknowledge the overrepresentation of patients with laryngeal dystonia in their cohort and decided to analyze this group separately. Second, this was an anonymous survey study, and the authors were unable to confirm the diagnoses of the participants. On the other hand, they used their own large database, as well as those from the Dystonia Research Medical Foundation and the National Spasmodic Dysphonia Association, rendering a significant number of misdiagnoses unlikely. Third, the relationships between tremor and

suicidal behavior, as well as treatment satisfaction and suicidal behavior, were not evaluated.

The findings of this study have several implications for clinical practice. Each patient with dystonia should undergo a thorough neuropsychiatric history and evaluation. In addition, as Worthley and Simonyan emphasize, clinicians should screen patients with dystonia for suicidality. Future studies should address whether other comorbid conditions such as tremor have any influence on suicidal behavior. In addition, evaluating whether the efficacy of dystonia treatment affects neuropsychiatric symptoms, including suicidality, could prove useful.

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