

Should neurologists diagnose and manage functional neurologic disorders? It is complicated

David L. Perez, MD, MMSc, Andrea L. Haller, MD, and Alberto J. Espay, MD, MSc

Neurology: Clinical Practice April 2019 vol. 9 no. 2 165-167 doi:10.1212/CPJ.0000000000000573

Correspondence

Dr. Perez
dlperez@partners.org

Abstract

Whereas only neurologists can “rule in” functional neurologic disorders (FNDs)—using physical signs and semiologic features—their role in follow-up care remains debated. We outlined the arguments for and against a neurologist’s primary role in both assessing and managing FNDs. Favorable arguments include the following: (1) FND presents neurologically, and thus, only neurologists can ascertain the etiology of new neurologic deficits appearing on follow-up, and (2) neurologic encounters facilitate acceptance of diagnosis and enhance treatment engagement. Counter arguments include the following: (1) FND is a Diagnostic and Statistical Manual of Mental Disorders, 5th Edition codified psychiatric disorder with largely psychiatric treatments, and (2) neurologists can reassess patients if new neurologic symptoms develop without playing a primary follow-up role. Although more research is needed to clarify optimal approaches, neurologic expertise could be leveraged for diagnostic and coordinating roles if the pool of neurologists, psychiatrists, psychotherapists, physical and occupational therapists, and other allied clinicians trained in the interdisciplinary care of FNDs is substantially increased.



Functional neurologic disorders (FNDs) are a prevalent source of neurologic disability. Previously termed “psychogenic,” the FND diagnosis no longer requires the presence of a psychological stressor per Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5) criteria, emphasizing the importance of phenotype. Diagnostic delays and a scarce supply of clinicians knowledgeable in these disorders magnify personal and societal costs. At the AAN’s 2018 Controversies in Neurology Plenary Session, Drs. Perez and Haller acknowledged that the diagnostic acumen rests on the neurologist but offered disparate perspectives on the neurologist’s role in the management of FNDs. The arguments outlined below, discussed in part during a subsequent *Neurology*® podcast with Dr. Espay, further advance this important dialogue.

Department of Neurology (DLP), Functional Neurology Research Group, Cognitive Behavioral Neurology Unit, Massachusetts General Hospital, Harvard Medical School; Department of Psychiatry (DLP), Neuropsychiatry Unit, Massachusetts General Hospital, Harvard Medical School, Boston; Athinoula A. Martinos Center for Biomedical Imaging (DLP), Massachusetts General Hospital, Harvard Medical School, Charlestown; Fort Wayne Neurological Center (ALH), Fort Wayne; Department of Neurology (ALH), Indiana University School of Medicine, Indianapolis; and Department of Neurology (AJE), University of Cincinnati Medical Center, OH.

Funding information and disclosures are provided at the end of the article. Full disclosure form information provided by the authors is available with the full text of this article at [Neurology.org/cp](https://www.neurology.org/cp).

FND, a condition at the interface of neurology and psychiatry, necessitates engagement from the neurologist throughout diagnostic assessment and longitudinal management. (D. L. Perez)

David L. Perez, MD, MMSc

FND, a condition at the interface of neurology and psychiatry, necessitates engagement from the neurologist throughout diagnostic assessment and longitudinal management. The arguments for this include the following (1) FND is a “rule-in” diagnosis based on neurologic examination of signs and semiologic features, making neurologic expertise critical.¹ Patients can also present with 1 symptom constellation and subsequently develop new symptoms emphasizing the importance of longitudinal neurologic assessments. (2) Neurologic encounters are primed to catalyze and support treatment across all phases of care. Neurologists are encouraged to share with patients their examination signs supporting the FND diagnosis,² and delivery of the diagnosis by a neurologist is among the first and most important treatment steps.³ Furthermore, neurology follow-up visits are primed to explore predisposing and perpetuating factors such as unhelpful illness beliefs and maladaptive avoidance behaviors, which can impede treatment and may not be initially identifiable. (3) Although it is helpful to frame FND as a “software problem” to highlight recoverability, there is emerging quantitative structural neuroimaging data suggesting that FND may be both a “hardware and software” problem further blurring the lines between neurologic and psychiatric frameworks.⁴ (4) Patients with FNDs can show marked improvements, which make working with this population satisfying. There is also a vibrant international community of FND clinicians and researchers, many of whom are prominent neurologists highlighting that work in this area can be professionally rewarding. Nonetheless, there remains a need to think constructively regarding how to “close the divide” between neurology and psychiatry for neuropsychiatrically complex patients.⁵ The comprehensive assessment and management of FNDs requires an interdisciplinary, team-based approach and the development of a subset of physicians with shared neurology-psychiatry expertise.

Andrea L. Haller, MD

FNDs are psychiatric disorders with diagnostic criteria codified in the DSM-5. Signs and symptoms in FNDs are inconsistent with any known medical or neurologic disorder.

When treating a patient with FNDs, the first step is a thorough evaluation to rule out the possibility that an organic neurologic disorder is the etiology of the patient’s symptoms. Next, the neurologist explains the diagnosis (validating symptoms) before providing reassurance that appropriate treatment is available and referring the patient to that treatment. Treatment of FNDs is non-neurologic. Cognitive behavioral therapy is a primary treatment, but other modalities are also used. Should patients with FNDs develop new neurologic symptoms over the course of treatment, reassessment and reassurance by the neurologist is appropriate.

Despite research-related functional and structural neuroimaging abnormalities, FND treatments are psychiatric, not neurologic. Similar neuroimaging abnormalities are identified in other psychiatric conditions (e.g., major depression and posttraumatic stress disorder). Where is the line drawn? Regarding closure of “the great divide,” I would ask are psychiatrists going to start managing Parkinson disease, stroke, or multiple sclerosis? I no more believe this is appropriate than I feel that neurologists are adequately trained to treat patients with FNDs.

Neurology exploded in breadth and depth during the past 2 decades, and during this period, resident training time was cut. There is more to learn and less time to learn it. Neurologists are not trained in the treatments of other specialties, and there are more demands on their time than ever before.⁶ To add the responsibility of managing this psychiatric disorder would be illogically burdensome. Patients with FNDs require time-intensive treatment that neurologists are not trained to provide. They deserve to be seen by practitioners skilled in the techniques with proven efficacy.

Next steps

Given the above discussions, continued interdisciplinary dialogue and large-scale clinical trials are needed to investigate, identify, and disseminate good evidence-based practices across providers involved in the assessment and management of FNDs. In our opinion, as awareness, provider expertise, and funding opportunities grow, it is likely that community neurologists may play a critically important role in the early diagnosis of patients with FNDs, while management and longitudinal follow-up (particularly for the most complex patients) may occur at academic medical centers within subspecialty treatment programs using an

Despite research-related functional and structural neuroimaging abnormalities, FND treatments are psychiatric, not neurologic. (A. L. Haller)

interdisciplinary approach that actively engages neurologists, psychiatrists, psychologists, social workers, physical and occupational therapists, and other allied clinicians as needed to develop a patient-centered, individualized treatment plan. The physician subspecialist guiding the treatment plan for patients will likely require both neurologic diagnostic expertise and neuropsychiatric proficiency. Unfortunately, there are multiple gaps in both clinical and research arenas that currently limit the practical execution of this promising yet challenging perspective, mostly notably minimal training across the clinical neurosciences in the assessment and management of FNDs and reduced investment in increasing the pool of allied health care professionals. Education and increased public awareness efforts are also sorely needed to support the development of effective treatments for patients with FNDs.

Conclusion

Although stemming from complex neurobio-psycho-social influences, FND manifests neurologically. Only neurologists (or neuropsychiatrists) are trained to assess the extent to which features are inconsistent and incongruent with the broad spectrum of other neurologic disorders to establish a clinically definite FND diagnosis.⁷ Nonetheless, there are severe constraints, including limited access to neurologists and mental health professions. Physiotherapy and psychological-based treatments allow neurologists to deploy these strategies for FND treatment, adopting a collaborative role in the interdisciplinary management. More research is needed to investigate optimal clinical practices for the longitudinal treatment of patients with FNDs.

Author contributions

D.L. Perez: drafting/revising the manuscript, study concept or design, and study supervision. A.L. Haller: drafting/revising the manuscript. A.J. Espay: drafting/revising the manuscript and study supervision.

Study funding

No targeted funding reported.

Disclosure

D.L. Perez receives research support from the NIH/NIMH and Sidney R. Baer Jr. Foundation and received honoraria from Harvard Medical School, the American Academy of Neurology, and the Movement Disorder Society. A.L. Haller reports no disclosures. A.J. Espay serves on the editorial boards of *Journal of Parkinson's Disease* and *Parkinsonism and Related Disorders* and has received grant support from the NIH, Great Lakes Neurotechnologies, Davis Phinney Foundation, and the Michael J Fox Foundation; personal compensation as a consultant/scientific advisory board member of AbbVie, NeuroDerm, Teva, Impax, Acadia, Acorda, Cynapsus/Sunovion, Lundbeck, Osmotica Pharmaceutical, and USWorldMeds; publishing royalties from Lippincott Williams & Wilkins, Cambridge University Press, and Springer; and honoraria from AbbVie, UCB, USWorldMeds, Lundbeck, Acadia, the American Academy of Neurology, and the Movement Disorder Society. Full disclosure form information provided by the authors is available with the full text of this article at Neurology.org/cp.

Publication history

Received by *Neurology: Clinical Practice* May 30, 2018. Accepted in final form August 7, 2018.

References

1. Daum C, Hubschmid M, Aybek S. The value of "positive" clinical signs for weakness, sensory and gait disorders in conversion disorder: a systematic and narrative review. *J Neurol Neurosurg Psychiatry* 2014;85:180–190.
2. Stone J, Edwards M. Trick or treat? Showing patients with functional (psychogenic) motor symptoms their physical signs. *Neurology* 2012;79:282–284.
3. Carson A, Lehn A, Ludwig L, Stone J. Explaining functional disorders in the neurology clinic: a photo story. *Pract Neurol* 2016;16:56–61.
4. Perez DL, Williams B, Matin N, et al. Corticolimbic structural alterations linked to health status and trait anxiety in functional neurological disorder. *J Neurol Neurosurg Psychiatry* 2017;88:1052–1059.
5. Price BH, Adams RD, Coyle JT. Neurology and psychiatry: closing the great divide. *Neurology* 2000;54:8–14.
6. Dall TM, Storm MV, Chakrabarti R, et al. Supply and demand analysis of the current and future US neurology workforce. *Neurology* 2013;81:470–478.
7. Espay AJ, Lang AE. Phenotype-specific diagnosis of functional (psychogenic) movement disorders. *Curr Neurol Neurosci Rep* 2015;15:32.

Practical Implications

Neurology® Clinical Practice is committed to providing clinical insights helpful to neurologists in everyday practice. Each Full Case includes a "Practical Implications" statement, a pearl of wisdom for the practicing clinician.
