

NO MAN'S LAND BETWEEN PSYCHIATRY AND NEUROLOGY: FUNCTIONAL NEUROLOGICAL DISORDERS AND CONVERSION DISORDER IN EMERGENCY DEPARTMENT SETTINGS

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Dear editor,

Functional neurological disorders (FNDs) are complex neuropsychiatric conditions currently defined as neurological symptoms inconsistent with structural central or peripheral nervous system disease. Also known as conversion disorder, FNDs' presentation with highly varied symptoms results from subtle nervous system dysfunction with information sensory and motor processing abnormalities in what is sometimes described as "software" problem. Historically, despite its common historical origin with famed neurologists Jean-Marie Charcot and Sigmund Freud's works on hysteria, neurology and psychiatry have parted ways and have long been approaching the same symptoms from different conceptual frameworks (Reynolds 2012). The divide between psychiatry and other medical specialties experienced throughout most of the 20th century resulted in poor or nonexistent communication between them with a major impact in the approach of these functional neurological symptoms both in clinical practice and in the quality of studies and data generated. At the core of the stigma and misunderstanding of these impairing disorders is the classical mind-body dualism paradigm. Largely outdated notions that many neurologists and psychiatrists end up trapped in include the historical but now inaccurate nomenclature of "organic" versus "non-organic" or "psychogenic" conditions.

Since FNDs (or conversion disorder) are prevalent in clinical practice, individuals suffering from these disorders are often neglected and misunderstood, suffering from a sub-optimal approach in the different levels of medical care. The authors' experiences in two major university hospitals'

emergency departments in Portugal prompted the need to briefly elaborate and call for attention on this important topic. We propose a brief exploration on the way emergency physicians deal with these patients in acute medical settings since many presentations are part of the differential diagnosis of other acute or subacute neurological disorders (e.g. stroke or epileptic seizures).

In our clinical experience these patients are often wrongly triaged directly to undergo emergency psychiatric assessments without a proper general medical assessment and even less frequently with a proper neurological evaluation. Even when such assessments are performed, they are usually not in line with current clinical recommendations resulting in incomplete diagnostic work-up, poor communication of the diagnosis and little or no explanation to the patient of positive findings. After a neurological assessment, once an FND diagnosis is made or suggested patients are usually either discharged home without a proper follow-up plan or simply referenced to psychiatry even if they present no previous psychiatric history, comorbidity and without any explanation given to the patient. Also often overlooked is the fact that patients can present with both functional and non-functional neurological disorders (e.g. patient with multiple sclerosis can present with a sensory or motor FND; patient with Parkinson disease can present with a movement FND).

There is an increasing number of evidence-based recommendations on the diagnostic and treatment approach of neurological functional symptoms. Indeed, several clinicians and researchers dedicated to the care of these patients have proposed a structured approach to FND patients presenting in primary care and emergency department settings (Anderson et al. 2019, Bennett et al. 2021, Cock & Edwards 2018, Stone et al. 2020). There is a general consensus that this neuro-psychiatric disorder requires an initial approach by neurology to appropriately detect positive clinical and neurological examination findings signaling this diagnosis. It is important to highlight that FND is a neurological *rule-in* diagnosis that requires a series of positive unequivocal findings on physical and neurological examination. Professor Mark Edwards highlighted in a recent commentary the need for neurologists to take long-term responsibility in the treatment of these patients instead of suggesting the diagnosis and discharging them (Edwards 2019). Indeed, despite inherent limitations in clinical trials the best evidence available today suggests that a correct diagnosis and specific integrated treatments for FND (including neurological rehabilitation, treatment of comorbidities, physical therapy, occupational therapy, psychotherapy, social work, etc.) show large effect sizes in comparison to pharmaceutical trials to other neurological diseases (Edwards 2019). A summary of consensual principles regarding the approach of FND in acute settings is presented in Table 1. These principles are useful in order to avoid some of the most common diagnostic pitfalls of FNDs.

There is still a long road ahead to attain the much-needed improvement in the care provided to those who suffer from these chronic highly debilitating disorders. True progress in this field cannot be accomplished until deeply rooted historical notions are challenged in everyday clinical practice and training in this field becomes mainstay in neurology training

Table 1. General principles regarding FNDs

FND is a neurological diagnosis that must be done by a neurologist or neuropsychiatrist (not a general psychiatrist, internist or primary care physician) based on clinical examination findings

Inquiring about traumatic life events and history of affective disorders is not useful in initial diagnosis

Positive neurological examination findings

Motor functional signs (e.g. Hoover sign, hip abductor sign, give-way weakness)

Sensory functional signs (e.g. midline splitting, non-dermatomal distribution)

Movement functional signs (e.g. tremor entrainment)

Visual functional signs (e.g. tubular visual field defect)

Non-epileptic seizures signs (e.g. long seizures, resistance to eyelid opening, absence of post-ictal confusion)

Laboratory, imaging and neurophysiological ancillary studies should be performed according to presentation even if there is clear evidence of FND

Inform the patient about the diagnosis based on positive examination findings while explaining the nature of the condition, risk factors and the fact that it is real, common and treatable

Avoid using terms such as psychogenic, implying feigning or telling the patient that the symptoms are “all in the head”, psychological reactions or simply due to stress

Treatment starts with a correct diagnosis and informing the patient appropriately but also involves individualized evidence-based interventions ranging from pharmacological treatment of medical and psychiatric comorbidities, neuro-rehabilitation, physical therapy, psychotherapy and occupational therapy

FND - Functional neurological disorder

programs. A modern scientific and unprejudiced understanding of these disorders and the design of specific evidence-based integrated treatment programs will allow FNDs to be approached with the same care as equally disabling diseases with much benefit to individual patients, families, healthcare systems and society.

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