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Review

Update on treatments of psychological nonepileptic seizures

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Abstract

The literature on treatment of psychological nonepileptic seizures (NES) is limited, marked by a number of case reports and anecdotal approaches to this difficult-to-treat population. A recent review of the NES treatment literature revealed 20 reports dealing with NES treatment. The majority of the reports were class IV studies. Since the prior review, a number of pilot trials in NES treatment have been published. In this article, we summarize the etiologic conceptualizations of NES, and link these to mechanism informed treatments. We describe the recent literature on NES treatments and propose future directions for intervention research.

Keywords: Psychological nonepileptic seizures; Treatment; Psychotherapy; Pharmacotherapy; Comorbid; Depression; Anxiety; Posttraumatic stress disorder; Cognitive-behavioral therapy; Family therapy; Serotonin; Selective serotonin reuptake inhibitor

1. Introduction

Neurological, psychiatric, and psychological publications are replete with descriptions of psychological nonepileptic seizures (NES). Hundreds of articles describe ictal semiology, psychiatric comorbidities, neurological findings, psychological makeup, and neuropsychological testing in patients with NES. Controlled treatment trials for NES, however, are lacking. The NES treatment literature was reviewed in 2003, and the majority of the articles consisted of class IV reports (case reports or case series), with a handful of class III reports [1].

In the current review, we describe the more recently published NES treatment articles. As the NES treatment research literature matures, we are beginning to see an increase in prospective trials. We highlight four articles from the past 3 years that approach NES treatment with a variety of interventions. The intervention chosen is based on the etiologic conceptualization for NES. Some of the proposed etiologies include: neuroanatomical/pathophysiological, psychodynamic with trauma and dissociation, psychosomatic misinterpretation, interpersonal, cognitive-behavioral, intellectual/learning difficulties, volitional feigning with conscious or unconscious awareness, communication difficulties, and family system disturbances [2–11]. Although trauma is frequently found in patients with NES, it is not universal. The fact that different modalities are being used in NES treatment illustrates that NES may have different underlying causes.

In the following section, we describe the main conceptualizations of NES, as well as treatment approaches for patients with NES. The treatment models include: pharmacotherapy, cognitive-behavioral therapy, psychodynamic psychotherapy, hypnosis, group therapy, and family therapy. We address these interventions and their application to NES treatment, treatment in the inpatient and outpatient settings, and the most recent studies examining these models. We conclude with directions for future research in NES treatment trials.

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2. Treatment of NES

Patients who display nonepileptic events do so as a result of an array of potential etiologies. Many of these have been outlined and categorized by other authors [12]. Based on clinical experience, perhaps the most difficult patient subgroup consists of patients who express emotional conflict through somatic symptoms. Most of the studies that are evaluated here focus on this subset of patients with NES.

Patients who somatize often have a constellation of depressive, dissociative, and anxiety and mixed personality disorders. Among the anxiety disorders, posttraumatic stress disorder (PTSD) in patients with NES may be particularly overrepresented. The high frequency of PTSD may be caused by the presence of diverse histories of childhood and adult trauma and abuse observed prominently in this population. Studies examining somatization and conversion disorders in general and those specifically examining patients with NES seem to confirm the prevalence of PTSD [13–15]. The findings of trauma and abuse appear to be valid even when compared with control populations [13,14]. Additionally, the presence of personality dysfunction, especially those spectrum disorders including the dependent and borderline types, may need to be addressed [16,17]. Valid treatment interventions may need to be based on a conceptual understanding of psychosomatic disorders including the accompanying Axis I and II features. As Janet wrote in 1907, "the best answer is to make hysteria intelligible, and, above all, to seek to give it some unity, by linking together ... some fundamental features, which serve at once to explain them, to connect them with one another" [18].

2.1. Toward a conceptualization of NES

To determine the most appropriate treatment strategy for patients with NES, a valid understanding of the potential causes of this disorder is necessary. There are several models that emphasize the contribution of affective, psychodynamic, and cognitive dysfunction to the illness. Although these models generally focus on somatoform disorders, they are also applicable to the development of NES. In addition, the models clearly are not mutually exclusive, and they overlap and complement each other considerably.

The relationship between depression and somatization has been reviewed by Katon et al. [19,20], who postulate that the somatic components of depression are emphasized by the patient at the exclusion of affective and cognitive aspects. The authors advocate a biopsychosocial model with cultural beliefs, childhood experiences (especially those that shun psychological interpretations of adverse events), poor coping strategies fixed at regressive developmental stages, and a current environment that includes significant primary (e.g., emotional) and secondary (e.g., financial) gain. Treatment would then focus on the resolution of a depressive disorder and the somatic misinterpretations.

The primary focus in psychodynamic interpretations is on the role of dissociation in the etiology of NES. Dissociation has been defined as a "failure to integrate aspects of perception, memory, identity, and consciousness" [21]. Dissociation has also been conceptualized as a defense against the potentially cataclysmic cognitive and affective components of traumatic experience. For the development of a dissociative disorder, trauma may be necessary but not sufficient and requires the presence of a psychological makeup that is deficient in its ability to effectively handle intrapsychic conflict and anxiety. Inadequate attachment as manifested by parental, especially maternal, influences may leave the individual vulnerable to revictimization and the development of unstable attachments. Thus, the appearance of NES in adult life may represent a somatic reenactment of a childhood experience [21]. Additionally, the ability to be hypnotized may provide a measure of dissociability and, as such, may be a valuable asset in diagnosis and treatment [22].

Unexplained somatic illness may also be conceived of as a cognitive dysfunctional disorder. In the cognitive model, dissociation serves a defensive function that protects the individual from overwhelming affect. The somatic symptom is a possible representation of the conflict itself. Janet was the first proponent of the effects of trauma resulting in a disconnection of an experience and its behavioral response from consciousness [23]. Brown has put forth a cognitive conceptual model that expands Janet's ideas, focusing on higher- and lower-level attentional systems. In the cognitive perspective, there are many behaviors that appear automatic and require low levels of attention. These behaviors may be associated with emotions and belief systems that are developed by our surrounding environment and influenced by emotional (primary) and financial (secondary) gain. They may influence behavior in an automatic fashion and appear and feel involuntary. In contrast, more novel activities that require a greater level of focused attention may be expressed as "volitional." The thrust of therapy here would entail making the patient aware of these "automatic" behaviors and distorted cognitive beliefs with the goal of changing the behaviors and beliefs [24].

2.2. Types of interventions and their definitions

2.2.1. Pharmacotherapy

Trauma, especially in childhood, appears to be important in the etiology of conversion disorders in general and NES in particular [13–15]. Serotonin may modulate behavioral inhibition in the brain and is useful in the treatment of PTSD. Serotonin deficiency may also