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Case Report

Use of Gabapentin for Conversion Disorder: Three Case Reports

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Abstract

Conversion disorder is an illness that often manifest after a stressful life event, trauma, or psychological distress. It persists for many years in majority of cases and in some cases, the prognosis is very poor. Conversion disorder causes clinically significant impairment in occupational, social, or other important areas of functioning and the healthcare cost associated with it can be very high, yet there is no specific pharmacological therapy for its management in clinical settings. The aim of this article is to present three cases of middle-aged women with conversion disorder treated with Gabapentin. The use of Gabapentin has not been studied in controlled trials for the treatment of conversion symptoms, particularly in the absence of epileptic seizures. Most studies have focussed on use of antidepressants, particularly Selective Serotonin Reuptake Inhibitors (SSRIs) in the treatment of conversion disorder. Previous studies have also linked anticonvulsant with pseudoseizures. However, in these three cases, Gabapentin was well tolerated and health improvement was observed following the administration of Gabapentin 300mg oral twice daily, and in one of the cases, the conversion symptoms vanished completely after optimized to 600mg oral twice daily. The conclusion is that gabapentin in pharmacological treatment of conversion disorder might be an option worth exploring in future larger studies.

Keywords: Conversion Disorder, Gabapentin, Psychogenic seizure

Introduction

Conversion disorder (CD), also known as functional neurological disorder (FND), is an illness characterized by psychogenic seizures or abnormalities in sensory/voluntary motor functions, without an obvious organic cause [1]. The symptoms of conversion disorder often manifest after a stressful life event, trauma, or psychological distress [2]. Conversion disorder is characterized by various clinical features including motor symptoms (e.g., unilateral limb weakness, functional tremor, dystonia, excessive fatigue, dissociative seizures, or epileptic seizures) and non-motor symptoms (e.g., speech disorder, memory and concentration problem, urinary retention, hearing loss or sensitivity and visual loss) [3,4].

As stated in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), the criteria for the diagnosis of conversion disorder are as follows: a) one or more symptoms of altered voluntary motor or sensory function; b) clinical results that demonstrate evidence of incompatibility between the symptoms and recognized neurological or medical disorders; c) symptoms or deficit that are not better explained by another medical or psychiatric disorder; d) symptoms or deficit that cause clinically significant discomfort or impairment in social, occupational, or other important areas of functioning or demands medical evaluation [5]. These symptoms may vary in intensity and may be intermittent or continuous [1]. In addition, a diagnosis of conversion disorder requires that the physician has a thorough understanding of the patient's sociodemographic, presence of stressors and comorbidities that may mimic conversion disorder [1,6]. Evidence from the literature suggests a link between conversion disorder and alterations in brain circuits [7] suggesting that conversion disorder is a real psychiatric disorder that warrants intervention [1].

Conversion disorder is more prevalent in women than men, with at least 2:1 ratio [8]. Although rare in the first decade of life, it affects all ages, and research has shown earlier age of onset for psychogenic seizures compared to sensory/motor functions deficits [9]. The onset of nonepileptic seizures peaks in the third decade while motor symptoms in the fourth decade. Prognosis may be worse in adults than in younger children. CD is associated with increased levels of physical disability and higher frequencies of psychological comorbidities than multiple sclerosis or epilepsy [8]. Studies have shown that symptoms of CD persist for many years in majority of cases and in some cases, it is hard to estimate the prognosis [10]. The healthcare cost associated with CD is very high with total annual estimate of $900 million reported in a recent study from the US [11].

In clinical practice, there is no specific pharmacological therapy for conversion disorder. Typically, the first line of treatment for conversion disorder is basic psychotherapy [12]. The general principle for the second and third line of treatment depends on the presence or absence of functional motor symptoms [12]. For individuals with functional motor symptoms, the second line of treatment consists of physical therapy, either as a standalone treatment or in combination with cognitive-behavioral therapy (CBT). For those without functional motor symptoms, CBT is recommended [12]. Medications aimed at treating conversion disorder include antidepressants, anxiolytics, or others depending on the associated psychiatric comorbidities [1]. It is important to note that clinical trials for the efficacy of these interventions remains limited [13] and given the complex nature of this disorder coupled with the increased rate of comorbid psychiatric illnesses such as dissociative disorder, trauma and mood disorders, intervention is usually individualized [14] and pharmacological treatment is targeted towards alleviation of comorbid psychiatric and somatic symptoms associated with this disorder [3].

In this article, three cases of middle-aged women with conversion disorder treated with Gabapentin are presented.

Case Presentation

Case 1

A 45-year-old separated Caucasian woman was admitted with a history of acute onset of paraplegia with loss of mobilization, preferring to lie supine in bed. There was no history of trauma and she was previously in good health. Examination of the back showed no focal area of tenderness, and she denied history of back pain. Neurological examination did not reveal any focal motor/sensation deficit bilaterally. When distracted, there was weak plan-

tar flexion bilaterally, although could not do toe walking. CT head, thorax and lumbosacral were normal. Blood work was essentially normal. The attending Internist being baffled requested a psychiatric consultation. She refused antidepressant trial because of past history of intolerant side effects of dizziness, headache and nausea to fluoxetine 20mg in her early 20s, prescribed by her family physician at the time for work-related depression. However, she was opened to any other medication suggestion.

At psychiatric assessment, she endorsed significant stress around pressurized work environment because of understaffing, family dynamics characterized by conflicts between mom and her younger sister while she was caught in the middle of it all, and adult son embroiled in drug addiction associated with persistent worry about his safety. Going to work was increasingly associated with anxiety and had to park one morning to gather herself together because of feeling so overwhelmed and having palpitation. As an introvert who tries to be there for everybody, she was not assertive enough to handle the family in-fighting. She was fearful for the safety of her son and lived in constant fear of the next phone call that might announce his demise. There was initial insomnia, with broken sleep of at least two awakenings over the night, associated with unrefreshed sleep. The Hospital Anxiety and Depression Scale (HADS) was used; she scored 6/21 on HADS-A for anxiety, and 5/21 on HADS-D for depression. Conversion disorder with weakness, acute episode, with psychological stressor from work-related stress, family dynamics and safety concerns for her son with addiction problem, was diagnosed. The diagnosis was discussed with her, although initially difficult to accept but was re-assured by the negative organic work-up. Following discussion of possible side effects and benefits, gabapentin 600mg PO in divided dose was commenced and held at this dose for three months to reduce risk of side effects, as she feared dose increase might be problematic based on experience to antidepressant in the past. She gradually started mobilizing with support and was discharged home five days later. She declined psychotherapeutic option but accepted follow-up with psychiatry. She was back to work, full time, 4 months after discharge.

Case 2

A 46-year-old married East Indian presented with sudden onset difficulty walking due to subjective complaints of weakness in the lower limbs. She described difficulty standing up from sitting position, needing to cling to someone or the wall while walking, with noticeable small strides, needing to stop intermittently to avoid falling. She was referred to psychiatry after full neurological work up yielded nothing significant. Her medical history only positive for essential hypertension which is well controlled by Candesartan 8mg orally. Full psychiatric evaluation was indicative of conversion disorder with weakness or paralysis, acute episode, with psychological stressor. The trigger appears to be concealed worry about the physical health of a close relative with worsening neurological issue. She was only given psychoeducation about the diagnosis, which was difficult for her to accept initially. Having a lot of reservation about medications in general, she reluctantly agreed to a trial of Gabapentin 300mg oral twice daily for one month and the optimized to 600mg oral twice daily thereafter. Her symptoms steadily improved within three months, and she was back to normal mobility after 6 months. Her fear of relapsing resulted in leaving her on Gabapentin 300mg oral twice daily, thereafter.

Case 3

A 43-year-old separated Caucasian woman presenting with sudden onset of 3-day duration of recurrent seizures, characterized by jerking movements of the limbs, more pronounced on the upper limbs. She had no history of seizure disorder or head injury. During the epileptic seizures, her eyes were closed but she could open them slightly if her name was called and each episode was lasting at least 6 minutes at a time. Frequency of seizures was up to twenty times daily. During the seizure episodes, there was no loss of sphincter control, no drooling or tongue-biting and she was fully responsive after seizure is extinguished, with no post-ictal confusion, other than tiredness. The seizures were video-recorded at home. In one of the recordings, she was verbally responding quietly to her name, and the seizure duration lasted 10 minutes. She was observed to have multiple seizure episodes in the hospital, similar to the recorded seizures. Diazepam 5mg IV repeated at 5 minutes interval up to 30mg dose did not abort the seizures. Neurological examination was normal and there was no focal deficit. The Complete Blood Count, electrolytes, BUN and prolactin were all normal. CT head, thorax and lumbosacral also returned

normal. EEG retuned normal. Psychiatric consult was requested.

She was in good physical health and her routine medication was Bupropion XL 300mg for depression for the previous 5 years, following separation. She held down a management level job at one of the local businesses. Psychiatric assessment revealed negative cognition of feeling not being "good enough" as a person with guilt feeling of being responsible for relationship breakup years earlier. She further revealed that seeing the ex-partner "happy in his new relationship" was confirmatory that she was the problem in their relationship. Prior to the seizure onset, she just saw the ex-partner and his new girlfriend coming out of one of the local restaurants, laughing and happy on her way home from work. The diagnosis of conversion disorder with attacks or seizure, acute episode, with psychological stressor was made. Psychoeducation was given about the diagnosis was given and was met with initial surprise. Gabapentin 300mg PO twice daily was commenced and she was discharged 2 days after psychiatric consult. The symptoms completely resolved within 8 weeks, and she returned back to full time duty after 3 months.

Discussion

Organic workup to out rule medical causes in these three cases was extensive, and included blood work, imaging and EEG and the results were negative confirming a diagnosis of conversion disorder. The functional decline associated with conversion disorder can be socially and occupationally disabling with resultant adverse economic outcome. The treatment of conversion disorder can be challenging due to lack of treatment specificity. In the absence of controlled trial data on the pharmacological treatment for CD, the current practice is to treat the comorbid psychiatric and somatic symptoms of CD with selective serotonin reuptake inhibitors (SSRIs), beta-blockers, analgesics, and benzodiazepines and to discontinue antiepileptic drugs unless they are beneficial [3,15]. Anecdotal evidence suggests SSRIs, beta-blockers, analgesics, and benzodiazepines are effective in treating conversion disorder [16]. An open-label study involving individuals with comorbid psychogenic movement disorder and depression demonstrated that these medications are also beneficial in reducing conversion symptoms [17]. A randomized-controlled trial has reported the efficacy of sertraline in patients with nonepileptic seizures and co-occurring depression and anxiety [18]. The benefits of antipsychotic medications in conversion symptoms have also been established [19,20]. However, our patient's health improved following the administration of Gabapentin 300mg oral twice daily, and in one of the cases, the conversion symptoms vanished completely after optimized to 600mg oral twice daily.

The use of Gabapentin has not been studied in controlled trials for the treatment of conversion symptoms, particularly in the absence of epileptic seizures. A previous case study had reported the use of Valproate in the treatment of conversion disorder [21]. The mechanisms of action of Gabapentin and Valproate are similar in the sense that they modulate voltage sensitive calcium channel subunits, decreasing entry of calcium ions and reducing glutamate release with consequent neuronal excitability reduction [22]. Gabapentin is a GABA analog, exerting its actions by binding to the alpha-2-delta subunit and thereby modulating the release of neurotransmitters. It is widely used as anticonvulsant, and has a role in neuropathic pain, insomnia, social anxiety disorder and adjunctively with mood stabilizers in bipolar patients, but its use in conversion disorder remains less understood. Although Gabapentin is generally well tolerated, it can cause some people to feel sedated, lightheaded or nauseous [22]. For this reason, patients using this drug are advised to exercise extreme caution when operating motor vehicles or dangerous machinery.

After a diagnosis of non-epileptic seizures, there is no universal guideline on whether antiepileptic medication should be continued [3]. If nonepileptic seizures appear to be the sole diagnosis and the patient voluntarily begins therapy, antiepileptic medicines can typically be titrated [15]. Even in this circumstance, it is advised to withdraw one medicine at a time over the course of several weeks or months [15]. Barbiturates and benzodiazepines are habit-forming and must be progressively reduced [15]. Many anti-epileptic medicines have concurrent mood-stabilizing effects, which is why they are sometimes prolonged [15]. In one of the cases, Gabapentin 300mg oral twice daily was continued more than 6 months with no side effects.

Conclusion

From psychopharmacological point of view, most studies have fo-

cussed on use of antidepressants, particularly Selective Serotonin Reuptake Inhibitors (SSRIs) in the treatment of conversion disorder, and no data was found in the literature about the use Gabapentin. Although in patients with CD with comorbid epileptic seizure, the use of anticonvulsant is advised. However, comorbid epileptic seizure was ruled out in the cases presented, yet Gabapentin improved our patients' symptoms of CD. Despite some literature data suggesting association of anticonvulsant with pseudoseizures [23,24], the use of Gabapentin in these cases was well tolerated with no incident of pseudoseizures, ataxia or aphonia [21]. This case reports show that the trial of gabapentin in pharmacological treatment of conversion disorder might be an option worth exploring, as it was successfully used in these cases. Further research using a larger sample is needed to investigate the efficacy of Gabapentin in treating conversion disorder.

Consent

Oral consents were given by the patients.

Conflicts of Interest

The authors have no conflict of interests to declare.

References

1. Ali, S., Jabeen, S., Jabeen, S., Shahid, M., Chinala, S., Nathani, M., et al. (2015) Conversion Disorder- Mind versus Body: A Review. Innov Clin Neurosci, 12(5-6): 27-33.
2. Ludwig, L., Pasman, JA., Nicholson, T., Aybek, S., David, AS., Tuck, S., et al. (2018) Stressful life events and maltreatment in conversion (functional neurological) disorder: systematic review and meta-analysis of case-control studies. Lancet Psychiatry, 5(4): 307-320.
3. Bennett, K., Diamond, C., Hoeritzauer, I., Gardiner, P., McWhirter, L., Carson, A., et al. (2021) A practical review of functional neurological disorder (FND) for the general physician. Clin Med (Lond), 21(1): 28-36.
4. Espay, AJ., Aybek, S., Carson, A., Edwards, MJ., Goldstein, LH., Hallett, M., et al., (2018) Current Concepts in Diagnosis and Treatment of Functional Neurological Disorders. JAMA Neurol, 75(9): 1132-1141.
5. American Psychiatric Association: Diagnostic and Statistical Manual of Mental disorders, 5th ed (DSM-5). Washington, DC, American Psychiatric Association, 2013.
6. Blitzstein, SM. (2008) Recognizing and treating conversion disorder. Virtual Mentor, 10(3): 158-160.
7. Ejareh Dar, M., Kanaan, RA. (2016) Uncovering the etiology of conversion disorder: insights from functional neuroimaging. Neuropsychiatr Dis Treat, 12: 143-153.
8. Carson, A., Stone, J., Hibberd, C., Murray, G., Duncan, R., Coleman, R., et al. (2011) Disability, distress and unemployment in neurology outpatients with symptoms 'unexplained by organic disease'. J Neurol Neurosurg Psychiatry, 82(7): 810–813.
9. Stone, J., Hoeritzauer, I., Brown, K., Carson, A. (2014) Therapeutic sedation for functional (psychogenic) neurological symptoms. J Psychosom Res, 76(2): 165-168.
10. Gelauff, J., Stone, J. (2016) Prognosis of functional neurologic disorders. Handb Clin Neurol, 139: 523-541.
11. Stephen, CD., Fung, V., Lungu, CI., Espay, AJ. (2021) Assessment of Emergency Department and Inpatient Use and Costs in Adult and Pediatric Functional Neurological Disorders. JAMA Neurol, 78(1): 88-101.
12. Stone, J., Sharpe, M., Dimsdale, J., Solomon, D. (2022) Conversion disorder in adults: Epidemiology, pathogenesis, and prognosis, UpToDate, 2022, Accessed 30th December 2022.
13. Feinstein, A. (2011) Conversion disorder: advances in our understanding. CMAJ, 183(8): 915-920.
14. Whiting, DL., Riashi, M., Perry, KN. (2019) A clinician's quick guide of evidence-based approaches: Functional neurological symptom disorder (conversion disorder). Clinical Psychologist, 23(2): 177-179.
15. Stonnington, CM., Barry, JJ., Fisher, RS. (2006) Conversion Disorder. Am J Psychiatry, 163(9): 1510-1517.
16. LaFrance, WC., Devinsky, O. (2004) The treatment of

nonepileptic seizures: historical perspectives and future directions. Epilepsia, 2(45 suppl): 15–21.

17. Voon, V., Lang, AE. (2005) Antidepressant treatment outcomes of psychogenic movement disorder. J Clin Psychiatry, 66(12): 1529-1534.
18. LaFrance, WC., Barry, JJ. (2005) Update on treatments of psychological nonepileptic seizures. Epilepsy Behav, 7(3): 364–374.
19. Marazziti. D., Dell'Osso, B. (2005) Effectiveness of risperidone in psychogenic stiff neck. CNS Spect, 10(6): 443–444.
20. Prigatano GP., Stonnington CM., Fisher, RS. (2002) Psychological factors in the genesis and management of nonepileptic seizures: clinical observations. Epilepsy Behav, 3(4): 343–349.
21. Messina, A., Fogliani, AM. (2010) Valproate in Conversion Disorder: A Case Report. Case Rep Med, 1-3.
22. Tripathi, KD. (2013) Essentials of medical pharmacology (7th ed), Jaypee Brothers Medical Publishers (P) Ltd: New Delhi.
23. Fukuchi, T., Ishida, S., Kato, M., Onuma, T. (1995) [Seven cases of pseudoseizure unnecessarily treated with AEDs]. No To Shinkei, 47(3): 239-244.
24. Weaver, DF. (2004) "Organic" pseudoseizures as an unrecognized side-effect of anticonvulsant therapy. Seizure, 13(7): 467-469.