



Uneventful Recovery from a Suicide Attempt with Tetrabenazine: A Case Report

Tetrabenazininle İntihar Girişimi Sonrası Sorunsuz İyileşme: Olgu Sunumu

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Summary

Patients with Huntington's disease (HD) have involuntary choreiform movements, dementia, psychiatric disorders and behavioral abnormalities. Suicide is very frequent with this disease and is the third most common cause of death. Depression is one of the common adverse effects of tetrabenazine, a drug used to treat chorea in HD, and this may increase the suicide rate in this disease. We report a patient who attempted suicide by taking tetrabenazine and recovered after treatment.

Keywords: Huntington's disease, tetrabenazine, suicide

Öz

Huntington hastalığı (HH) olan hastalarda istemsiz koreiform hareketler, demans, psikiyatrik bozukluklar ve davranışsal anormallik şikayetleri görülür. İntihar meylli, hastalıkta oldukça sık görülür ve bu hastalardaki üçüncü en sık görülen ölüm sebebidir. Tetrabenazinin, HH'de görülen koreinin tedavisi için kullanılan bir ilaçtır ve sık yan etkilerinden birinin depresyon olması nedeniyle hastalarda intihar riski yükselebilir. Bu, tetrabenazinin alarak intihara kalkışmış ve tedavi sonrası iyileşmiş bir hastanın olgu sunumudur.

Anahtar Kelimeler: Huntington hastalığı, tetrabenazinin, intihar

Introduction

Huntington's disease (HD) is an autosomal dominant disorder characterized by involuntary choreiform movements, cognitive decline, psychiatric disorders, and behavioral abnormalities. The behavioral and psychiatric problems have been shown to disturb patients and their relatives more than chorea (1). George Huntington highlighted that the increased risk of suicide is an important part of HD (2).

There is no cure for HD at the moment; however symptomatic treatment can be provided. Tetrabenazine, which was approved by the United States Food and Drug Administration in 2008 for the treatment of Huntington's chorea, depletes presynaptic dopamine by inhibition of vesicular monoamine transporter 2 (VMAT2). Tetrabenazine is the first-choice drug to symptomatically treat chorea in HD (3).

Suicide is the third most common cause of death in HD (4). Whether tetrabenazine increases the suicide risk has yet to be

established. Nevertheless, physicians should pay attention to the adverse effects of tetrabenazine, which lead to an increased risk of suicide. This is a case report of a patient with HD who attempted suicide by taking an overdose of her tetrabenazine medication. This case is presented to discuss the increased suicide risk effect as well as acute effects of high-dose tetrabenazine. To our knowledge, this is the third case of self-poisoning with tetrabenazine.

Case Report

A woman aged 54 year years with a 10-year history of HD was admitted to the emergency service with symptoms of drowsiness, dizziness, nausea, vomiting, and difficulty in movement.

During the neurologic examination, the patient opened her eyes in response to verbal commands; however, she did not reply to questions and followed only one step motor commands. She had hypomimia and bilateral symmetrical bradykinesia and

rigidity. Her medical history showed that she had been taking tetrabenazine 75 milligrams/day for the past 3 months and sertraline 50 milligrams/day for the past 2 months. She had previously been diagnosed as having HD and an anxiety disorder. She had no previous suicide attempts.

The patient's daughter informed us that 32 tablets of tetrabenazine (in total 625 milligrams of tetrabenazine) were missing from the box. The patient also stated that she had taken them to commit suicide an hour before she was brought to the hospital. Blood level of tetrabenazine was not checked; however, the patient's daughter and the patient's claims in addition to the development of drowsiness and parkinsonism supported self-poisoning with tetrabenazine. Lack of prolonged QT interval in electrocardiogram (ECG), no increase in creatine phosphokinase (CPK), and monitoring consciousness eliminated the possibility of neuroleptic malignant syndrome caused by tetrabenazine.

The patient was hydrated and detoxicated with active charcoal. Renal and hepatic dysfunction, and respiratory problems were not present. She was hospitalized and fully recovered with resolution of parkinsonism in 48 hours. In the long term; tetrabenazine 75 milligrams/day was continued, sertraline was increased to 100 milligrams/day and 15 milligrams/day of clonazepam was added to her medication.

Discussion

Suicide is an avoidable cause of death in HD. Physicians should be careful about depression and suicidal ideation in patients, because they are very common in HD. Studies have shown that suicide risk for patients with HD is four to eight times higher than the general population (4,5,6).

Tetrabenazine, a drug used to treat symptomatic Huntington's chorea, is a very effective drug with relatively low-risk adverse effects. Shen et al. (7) reported that they had to discontinue tetrabenazine in 2 out of 145 patients because of suicidal ideation, which resolved after treatment cessation. The Huntington's Study Group reported a patient in their tetrabenazine group who committed suicide (8). Other studies have indicated that tetrabenazine is not associated with suicide (9). Dorsey et al. (10) reported that in 1360 patients with HD who were taking tetrabenazine, they found no association of tetrabenazine with increased risk of suicidal ideation, suicide attempts, suicide or depressed mood.

Self-poisoning with tetrabenazine is rarely reported. A woman aged 27 years was reported to have experienced sedation only, with no significant sequelae, after ingestion of 1 gram of tetrabenazine (11). Also in an efficacy study, one out of 31 patients using tetrabenazine discontinued therapy because of self-poisoning (12). The most common acute adverse effects are reversible when the dose is decreased and include drowsiness/sedation, weakness, parkinsonism, depression, and acute akathisia (9,13). Other much rarer adverse effects include insomnia, nervousness/anxiety, nausea and vomiting, tremor, memory problems, confusion, "trance-like/zombie," orthostatic hypotension, balance and gait difficulties, dizziness, diarrhea, headaches, hallucinations, paresthesias, pharyngeal spasm and pain, blurred vision, panic attacks, and paranoia (13). There are no reports of significant persistent long-term changes (13).

An important limitation of this case report is the inability to report the blood level of tetrabenazine. It may have been helpful to discuss the amount of tetrabenazine in the blood that lead to the reported clinical conditions. Future studies may benefit from assessing the adverse effects for different doses of tetrabenazine.

Patients with HD benefit from tetrabenazine regarding the symptomatic treatment of their chorea. Fortunately, depression caused by tetrabenazine is reported to be responsive to antidepressants (14). However, physicians should be alert to its adverse effects, which include depression and increased suicide risk, and instead of stopping tetrabenazine, concomitant antidepressant use should be considered if necessary.

Authorship Contributions

Informed Consent: Consent form was filled out by the participant, *Concept:* Ece Bayram, Fatma Nazlı Durmaz, Mubittin Cenk Akbostancı, *Design:* Ece Bayram, Fatma Nazlı Durmaz, Mubittin Cenk Akbostancı, *Data Collection or Processing:* Ece Bayram, Fatma Nazlı Durmaz, Mubittin Cenk Akbostancı, *Analysis or Interpretation:* Ece Bayram, Fatma Nazlı Durmaz, *Literature Search:* Ece Bayram, Fatma Nazlı Durmaz, *Writing:* Ece Bayram, Fatma Nazlı Durmaz, Mubittin Cenk Akbostancı, *Peer-review:* Externally peer-reviewed. *Conflict of Interest:* The authors declare no conflict of interest, *Financial Disclosure:* The authors declare that this study has received no financial support.

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