Journal of Alzheimer's Parkinsonism & Dementia

Research Article

A Cervical Dystonia Successfully Treated With Tetrabenazine Augmentation of Clozapine and Botox

Preve M*, Godio M, Suardi NE, Moor AR, Bolla E, Colombo RA and Traber R

Sociopsychiatric Organization, Psychiatric Clinic, Mendriso, Switzerland

This article was published in the following Scient Open Access Journal:

Journal of Alzheimer's Parkinsonism & Dementia

Received October 02, 2017; **Accepted** November 21, 2017; **Published** November 28, 2017

Abstract

We report a successful treatment of 44-year-old Caucasian gentleman affected by paranoid schizophrenia with a cervical dystonia treated with tetrabenazine augmentation of clozapine and botox. A progressive reduction of the spazmatic torcicollis in the subsequent 3-6 months is observed without particular side effects.

Keywords: Schizophrenia, Tetrabenazine, Dystonia

Introduction

Dystonia is a movement disorder in which a person's muscles contract uncontrollably, involuntarily, causing repetitive and twisting movements. The condition can affect one part of body like in focal dystonia, two or more adjacent parts like in segmental dystonia or all parts of your body like in general dystonia. The muscle spasms can be mild or severe, and might interfere with your performance of day-to-day tasks. In cervical dystonia the contractions cause your head to twist and turn to one side, or pull forward or backward, sometimes causing pain and disability. Medications like anticholinergic, dopamine modulators, muscle relaxants, baclofen, and other pharmacologic agents have been used for the treatment of muscular dystonia. Moreover introduction of botulinum toxin, deep brain stimulation and in the last few years tetrabenazine, have given new impulse to the symptomatic treatment of this neurological movement disorder. Tetrabenazine has been used for decades in several countries to treat hyperkinetic movement disorders like chorea in Huntington's disease, and other hyperkinetic movement disorders such as dystonias and tics, hemiballismus, senile chorea, Tourette syndrome and other tic disorders, as well as tardive dyskinesia.

Therapy of dystonia could be subdivided into these categories: physical, supportive, and ancillary therapies; pharmacologic treatment; chemodenervation with botulinum toxin (botox); peripheral and central surgery [1,2]. Tetrabenazine is a presynaptic depleter of dopamine, a monoamine storage inhibitor that was first introduced in the 1970s for the management of hyperkinetic movement disorders and which reduces the muscle spasms without systemic side effects, and is also used in patients with generalized or multifocal dystonia [1,2]. For management of dystonias, 1 of 3 small prospective blinded studies and 4 of 5 retrospective studies reported clinical benefit with TBZ use in pediatrics and adults [3]. Dystonia is a neurological movement disorder, characterized by spasms and sustained contractions of the muscles. The aim of this study is to present a case report of a cervical dystonia successfully treated with tetrabenazine augmentation of clozapine and botox.

Method

SC, a 44-year-old Caucasian gentleman affected by paranoid schizophrenia was followed in our outpatient service. He had developed chronic extrapyramidal side effects (dystonia), due to the continuos treatment with classical neuroleptics. During the time of neuroleptic treatment, the patient had presented a spasmatic torcicollis. This problem had no resolution with medications like biperidene, propranolol, benzodiazepines (like diazepam, clorazepam and lorazepam), and others that are normally used to treat this extrapyramidal side effects. He then received botox injections every three months to treat dystonia and antipsychotic treatment was switched to clozapine (200 mg/day up to 400 mg/day), again with no resolution of the side effects. We then prescribed

***Corresponding Author:** Matteo Preve, Sociopsychiatric Organization, Psychiatric Clinic, Via Agostino Maspoli 6, 6850 Mendriso, Svizzera, Switzerland, Tel: +410787195878, Email: m_preve@yahoo.com

tetrabenazine which was progressively increased up to 75 mg/day, with a progressive reduction of the spazmatic torcicollis in the subsequent 3-6 months. After 6 months of treatment the patients showed a substantial improvement of the chronic dystonia.

Results

An outpatient followed by our psychiatric service assessed with: the Structured Clinical Interview for DSM - patient version (SCID-P) for the axis I diagnosis, the Short Form Health Survey (SF-36) to determine the quality of life and a scale for extrapyramidal side effects Simpson-Angus Extrapyramidal Side Effects Scale (SAS The Cut-off normally used in the SAS Scale include (for the degree of movement disorder): < 3 normal || 3-5 minimal || 6-11 clinically significant || 12-17 severe|| ≥18 extreme. Hence, we obtained a positive response to the treatment of dystonia with tetrabenazine augmenting it with clozapine and botox. We observe a progressive reduction of the total score at the SAS in particular: SAS TOT initial 21, SAS TOT after 1 month was 12, SAS TOT after 3 months was 9, at the end point at 6 months was 5). We observe a progressive improvement of SF-36 total score in particular: initial SF 36 total score was 20, at 1 month SF 36 total score was 28, at 3 and 6 months SF 36 total score was, 35.

Discussion and Conclusion

Tetrabenazine (TBZ) a dopamine-depleting agent is used for the treatment of a variety of movement disorders [4,5]. TBZ is considered a potential first-line agent and is known to be one of the most effective drugs in treating tardive dyskinesia, and frequently occur adverse effects such as depression, akathisia and Parkinsonism [6]. TBZ is a moderately effective treatment of a large variety of hyperkinetic movement disorders, with excellent effects in a subgroup with chorea and facial dystonia/dyskinesias [4]. Tardive dyskinesia (TD) is an iatrogenic movement disorder most commonly observed in patients with psychotic disorders who are treated with dopamine D2 blocking antipsychotic medications [7] and, tardive dystonia is a subtype of tardive dyskinesia which is rarely recognised and diagnosed. In literature the augmentation effect of tetrabenazine with clozapine probably played a role in the rapid alleviation of tardive dyskinesia, demonstrating that the combination therapy is more effective that one [8].

To our knowledge, this is the first paper reporting an improvement of a dystonia (spasmatic torcicollis) with tetrabenazine augmentation of clozapine and botox treatment Tetrabenazine was well tolerated and not linked to increased adverse effects, including those that have been reported more frequently (eg, parkinsonism, depression, and sedation). Moreover the particular mechanism of action of tetrabenazine could provide an innovative treatment of this negative, adverse and chronic event, with consequent improvement of the quality of life of the patients suffering from it. Further research is warranted to replicate our clinical observations and, in general terms, controlled studies are needed to confirm the efficacy of this treatment.

References

1. Jankovic J. Medical treatment od dystonia. *Mov Disord.* 2013;28(7):1001-1012.
2. Tarsy D, Simon DK, Dystonia. *N Engl J Med.* 2006;355(8):818-829.
3. Chen JJ, Ondo WG, Dashtipour K, Swope DM. Tetrabenazine for the treatment of hyperkinetic movement disorders: a review of the literature. *Clin Ther.* 2012;34(7):1487-1504.
4. Paleacu D, Giladi N, Moore O, Stern A, Honigman S, Badarny S. Tetrabenazine treatment in movement disorders. *Clin Neuropharmacol.* 2004;27(5):230-233.
5. Kenney C, Jankovic J. Tetrabenazine in the treatment of hyperkinetic movement disorders. *Expert Rev Neurother.* 2006;6(1):7-17.
6. Aia PG, Revuelta GJ, Cloud LJ, Factor SA. Tardive dyskinesia. *Curr Treat Options Neurol*. 2011;13(3):231-241.
7. Witter DP, Holbert RC, Suryadevara U. Pharmacotherapy for the treatment of tardive dyskinesia in schizophrenia patients. *Expert Opin Pharmacother.* 2017;18(10):965-972.
8. Kimiagar I, Dobronevsky E, Prokhorov T, Miniovitz A, Rabey JM. Rapid improvement of tardive dyskinesia with tetrabenazine, clonazepam and clozapine combined: a naturalistic long-term follow-up study. *J Neurol.* 2012;259(4):660-664.