

Tardive dystonia: a troublesome side-effect of conventional antipsychotic medicines

Anupam Pokharel¹
Naba Raj Koirala²
Vidya Dev Sharma³
Abdul Khalid⁴

Abstract

Tardive dystonia is a frustrating condition encountered after prolonged use of conventional dopamine receptor antagonist drugs. The present case report illustrates the development of tardive dystonia after 24 months of continuous use of haloperidol, which was managed well with olanzapine and tetrabenazine in combination. Less promising outcome of various treatment modalities is discussed and cautious use of dopamine receptor antagonist drugs is advocated.

Keywords: tardive dystonia; dopamine receptor antagonist; tetrabenazine; olanzapine.

Introduction

Tardive dystonia consists of sustained slow twisting movements affecting the limbs, trunk, neck or face, usually attributable to dopamine receptor antagonist drugs, also described as conventional antipsychotic medication.¹ Keegan and Rajput² first used the term 'dystonia tarda' to describe the condition. Burke *et al*³ suggested tardive dystonia followed years after the use of antipsychotic medications, the average duration in his patients being 3-7 years. However, later studies found a sizable minority developing the condition even after a year's exposure to the drugs.^{4,5}

Although considered under Tardive dyskinesia in the past, Tardive dystonia may have different pathophysiology, the details of which are still obscure, and unlike Tardive dyskinesia, Tardive dystonia causes severe distress to the patient and can result in significant neurological disability and functional incapacity.⁶ Though, it is not always easy to differentiate Tardive dystonia from Tardive dyskinesia, the distinction is chiefly important because the different options presented for the treatment.¹

The various treatment modalities for Tardive dystonia have varying response rates. Though the use of reserpine¹, calcium channel blocker^{7,8}, and high dose of anticholinergics³ are described to be beneficial in some cases, the most convincing results have been found with tetrabenazine and clozapine. Tetrabenazine has been found to be effective in 80.5% of cases.⁹ However, when concomitant psychotic condition is too severe, Clozapine is the most advocated drug.^{10,11} Despite the controversial cause-effect relation, there has been few reports about the role of newer antipsychotics like Olanzapine as an effective drug in Tardive dystonia unresponsive to clozapine.¹² Despite this, the response may not be very promising and the serious side effects of the above mentioned drugs are yet other obstacles in the management of the condition.

We present here a case report of a patient who developed features of Tardive dystonia following prolonged use of haloperidol.

Case Report

Mr. A, a 23-year-old man, following the death of his grandmother, displayed elated mood, hyperactivity, pressure of speech, flight of ideas, grandiose delusions of ability and identity, decreased need for sleep and loss of normal social inhibition with resultant embarrassing behaviour. There was no evidence of organic etiology and psychoactive substance use was not suspected. Oral haloperidol was started after a month of start of the symptoms and was discontinued six months later. Symptoms reemerged after three months of drug free period and the same medication was restarted to treat the condition. The patient received the diagnosis Bipolar Affective Disorder, currently in mania (F 31.1) according to ICD-10 [International Classification of Diseases].¹³

After being on oral Haloperidol for 24 months, although the mood symptoms were not present, the patient started displaying sustained slow twisting movements affecting the neck and face. The patient started complaining of severe distress and it caused disturbance in his routine activities. This condition was diagnosed as 'Tardive dystonia'.

He was then treated with Sodium valproate up to 1000 mg/day along with Clozapine 500 mg/day, which he took regularly for four months after which he was readmitted as he was not improving in the movement problem although the mood symptoms were not present.

Mr. A. was then put on Olanzapine, which was gradually built up to 20 mg/day. The drug was continued for 6 weeks,

without any gain regarding the movement problem. Finally Olanzapine was readjusted (10 mg/day) and Tetrabenazine was started at 25 mg per day in combination with Olanzapine and a buildup to 75 mg per day in divided doses. By two weeks of this combination therapy, the patient had improved much in both mood and movement symptoms.

Discussion

Tardive dystonia, when encountered, is distressing to the patient and frustrating to the therapist. This condition is many times difficult to manage than the condition for which dopamine receptor antagonist medication was started. Switching to clozapine or another atypical antipsychotic and treatment with tetrabenazine, reserpine and botulinum toxin are possible options.¹¹ Although tetrabenazine has been said to be effective in more than two thirds of the cases⁴, recurrence of the psychotic symptoms is always a possibility. Clozapine is the drug of choice when the concurrent psychotic symptoms also need management. Lieberman *et al*¹⁰ suggested that one has to wait for approximately 30 months to achieve a 50% improvement when the condition is managed with clozapine. However, such a long wait to recovery in such a distressing condition obviously forces the clinician to opt for other modes of treatment. The use of tetrabenazine and olanzapine in the present case following six months of fruitless clozapine therapy can be explained on the same background.

Thus, the present case illustrates the need to apply caution regarding the use of dopamine receptor antagonists. When these drugs are used for bipolar affective disorders, this treatment should not extend for long. The report of a short exposure of 3 weeks⁵ implicated in the development of Tardive dystonia makes us think about such drugs to be used very cautiously. This case report also suggests a reason to consider the use of the new atypical antipsychotics, which will lead to a significant decrease in TD.

References

1. Lishman WA. Organic psychiatry: the psychological consequence of cerebral disorders. 3rd edn. Blackwell Science: London, 1997.
2. Keegan DL, Rajput AH. Drug induced dystonia tarda – treatment with L-dopa. *Disease of the Nervous System*, 1973; **38**: 167-169.
3. Burke RE, Fahn S, Jankovic J, Marsden CD, Lang AE, Gallomp S, Ilson, J. Tardive dystonia: late onset and persistent dystonia caused by psychotropic drugs. *Neurology*, 1982; **32**: 1335-1346.
4. Kang UJ, Burke RE, Fahn S. Natural history and treatment of tardive dystonia. *Movement Disorder*, 1986; **1**: 193-208.
5. Burke RE, Kang UJ. Tardive dystonia: clinical aspects and treatment. In: *Facial Dyskinesias*. Eds Jankovic, J.J. and Tolosa, E. *Advances in Neurology*, 1988; **49**: 199-210.
6. Owens C. Extrapyramidal side effects of psychotropic drugs. London: Oxford University Press, 1999.
7. Falk WE, Wojcik JD, Gelenberg AJ. Diltiazem for tardive dystonia. *Lancet* 1988; **I**: 824-825.
8. Adler L, Duncan E, Reiter S. Effects of calcium-channel antagonists on tardive dyskinesia and psychosis. *Psychopharmacology Bulletin*, 1988; **24**: 421-425.
9. Jankovic J, Beach J. Long-term effects of tetrabenazine in hyperkinetic movement disorders. *Neurology* 1997; **48** (2): 358-62.
10. Lieberman JA, Saltz BL, Jones CA, Pollack S, Borenstein M, Kane JM. The effects of clozapine on Tardive dyskinesia. *British Journal of Psychiatry* 1991; **158**: 503-510.
11. Raja M. Managing antipsychotic-induced acute and tardive dystonia. *Drug Saf*, 1998; **19** (1): 57-72.
12. Jaffe MA, Simpson GM. Reduction of Tardive Dystonia with Olanzapine. *American Journal of Psychiatry* 1999; **156**: 2016.
13. W.H.O. International Classification of Disease of Related Health Problems. Tenth Revision. Clinical Description and Diagnostic Guidelines. Geneva: World Health Organization, 1992.