

METOCLOPRAMIDE INDUCED AKATHISIA

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ABSTRACT

Akathisia is characterized by unpleasant sensation of restlessness that appears as an inability to stay motionless. Antipsychotic medications are known to cause akathisia. We are reporting a case of a 34 year old lady who developed akathisia after receiving metoclopramide.

Key words: Akathisia, Metoclopramide, Antipsychotic medications

INTRODUCTION

Akathisia is characterized by the subjective feelings of restlessness or the objective signs of restlessness. It is a known side effect of antipsychotic medications¹. Diagnostic and Statistical Manual of Mental Disorder (DSM-IV) explicitly operationalizes the criteria for neuroleptic induced acute akathisia². There is a body of literature on assessing and treating this adverse reaction related to antipsychotic medications³. Easy access to medication due to over the counter (OTC) availability poses a serious health hazard in Pakistan. Medications can be purchased and used without supervision. Though legislation regarding licensing and dispensing of drugs exists it is not strictly implemented. We are reporting a case in this context where easily availability of a drug led to serious neuropsychiatric consequences.

CASE REPORT

A 34-years-old lactating mother, known case of Glucose-6-phosphate dehydrogenase deficiency, presented in the emergency room (ER) with 5 weeks history of persistent feeling of doom and nervousness, palpitation, epigastric discomfort, tachypnea, and disturbed sleep and appetite. She was diagnosed with General Anxiety Disorder and Tab. Lorazepam was prescribed. In the next 2 weeks her symptoms persisted, she developed an uncontrollable urge to move her limbs along with involuntary movements of hands that had a waxing and waning pattern. These movements subsided during sleep and were minimal on waking up, only to be exacerbated during the course of the day. In subsequent ER visit, she reported having delivered a baby six months ago after which she started taking OTC Metoclopramide 10 mg thrice daily to induce lactation, according to the information she found on the internet. In the ER, she was prescribed Tab. Sertaline 25mg and Tab. Clonazepam 1mg and was discharged. She was back the next day with similar complaints. Akathisia was identified and she was started on Tab. Propranolol 30mg and Tab. Alprazolam

1.5mg in divided doses. However, there was no relief of symptoms and she was admitted to psychiatry unit. On Neurological examination she had exaggerated reflexes in both the upper limbs. Planters were down going. Tone, power and bulk were normal in all muscle groups with normal cranial nerve examination and cerebellar testing. There were no abnormal oro-lingual or facial movements. Complete blood count, electrolytes, urea, creatinine, serum ceruloplasmin, liver and thyroid profile were unremarkable. The Diagnosis of Metoclopramide induced akathisia was made. Metoclopramide was stopped immediately. She was started on Tab. Tetrabenzine 12.5 mg twice daily, which was increased to 25 mg twice daily over the next few days. Tab. Clonazepam 1 mg. twice daily was continued, and Tab. Citalopram 20 mg was added, to control anxiety symptoms. The involuntary movements subsided within 3 days of hospital admission.

DISCUSSION

Metoclopramide is one of the most common OTC antiemetic. However, it also remains the galactagogue of choice due to relatively better efficacy. It acts by blocking D2 receptors, in the brain stem, which modulate meso-limbic and mesocortical tracts originating in the ventral tegmental area (VTA)⁴. D² receptor blockade increases prolactin by at anterior pituitary. Prolactin may reach 3-8 times the normal level within one hour of Metoclopramide administration and may maintain this level for upto 8 hours. Optimal dose of Metoclopramide for induction of lactation is 10-15mg thrice a day for 1-2 weeks⁵. Chronic use may cause movement disorders, such as acute dystonia, akathisia, myoclonus, motor tics, parkinsonism and tardive dyskinesia (TD). Among all, TD is the most serious, irreversible and disfiguring side effect present in 4% of cases. Metoclopramide is reported to be the second most common drug, after haloperidol, which is associated with TD (39.4 %)³. The risk factors are old age, female gender (3:1 ratio), high dose of drug, long duration of therapy and diabetes mellitus^{6,7}. Most recently, food and drug administration (FDA) restricted its use to no longer than 30 days and issued a box warning about the risk of movement disorders with longer use⁸.

Metoclopramide associated akathisia often goes unrecognized and is misdiagnosed as anxiety. The incidence is 3.5% with oral and 20-25% with intravenous use⁹. and may develop as early as 3 days or several days

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later⁷. Patient experiences restlessness, tension, feelings of distress and agitation. The behavior sequel are inability to sit still, rocking back and forth and, repetitive touching or grasping¹⁰.

This case also underscores the need of a regulating body to control availability of medications over the counter. The prevalence estimate of self-medication in Pakistan is 51%¹¹. Most drugs can be purchased over the counter. Vast majority of people do not have health insurance and they tend to avoid the medical bill by purchasing medications OTC without consulting with the physician. However this practice may increase the cost burden due to adverse consequences¹¹.

This case also underscores the negative impact of information about medications and easy accessibility through internet.

CONCLUSION

Metoclopramide induced akathisia is a serious side effect which need the attention of the medical community. This is especially in the context of Pakistan where licensing and dispensation of medications is often unregulated. More research needs to be done to quantify the extent of the problem and to developed informed guidelines.

CONFLICT OF INTEREST

Author report no conflict of interests.

REFERENCES

1. Adler LA, Angrist B, Reiter S, Rotrosen J. Neuroleptic induced akathisia: a review. *Psychopharmacology (Berl)* 1989;97:1-11.
2. American Psychiatric Association. *Diagnostic and statistical manual of mental disorders*. 4th ed. Washington, DC: APA; 1994.
3. Wells BG, Cold JA, Marken PA, Brown CS, Chu CC, Johnson RP, et al. A placebo-controlled trial of nadalol in the treatment of neuroleptic-induced akathisia. *J Clin Psychiatry* 1991;52:255.
4. Gabay MP. Galactogogues: medications that induce lactation. *J Hum Lact* 2002;18:274-9.
5. Haddad AC, Heffner KE. What is the recommended dosage of metoclopramide for the induction of lactation in the biological mother of a child borne by a surrogate mother [Online]? 2010 [cited on 2013 July 20]. Available from: <http://issuu.com/msopdu/docs/metoclopramide>.
6. Kenney C, Hunter C, Davidson A, Janko- vic J. Metoclopramide, an increasingly recognized cause of tardive dyskinesia. *J Clin Pharmacol* 2008;48:379-84.
7. Sewell DD, Jeste DV. Metoclopramide- associated tardive dyskinesia: an analysis of 67 cases. *Arch Fam Med* 1992;1:271-8.
8. Cicek M, Karcioglu O, Parlak I, Ozturk V, Duman O, Serinken M, et al. Prospective, randomized, double blind, controlled comparison of metoclopramide and pethidine in the emergency treatment of acute primary vascular and tension type headache episodes. *Emerg Med J* 2004;21:323-6.
9. Miller LG, Jankovic J. Metoclopramide induced movement disorders. *Arch Inter Med* 1989;149:2486-92.
10. The U.S. Food and Drug Administration (FDA). FDA requires boxed warning and risk mitigation strategy for metoclopramide containing drugs: agency warns against chronic use of these products to treat gastrointestinal disorders. Silver Spring, MD: FDA; 2009.
11. Haider S, Thaver IH. Self medication or self care: implication for primary health care strategies. *J Pak Med Assoc* 1995;45:297-8.

CORRIGENDUM

The affiliation for Martin J. Dorahy should be read as Department of Psychology, University of Canterbury, Private Bag 4800, Christchurch 8140, New Zealand, in the article titled, "The dissociative experiences scale: An Urdu translation" published in *J Pak Psych Soc* 2010;10(1):46-50. This and other minor/clerical mistakes have been corrected in the online version (PDF) of the article. The online version of the article is to be considered as the final published article.