

Acute muscle dystonia resulting from medication error: a case report**Bhupendra P. Solanke¹, Ganesh N. Dakhale^{2*}, Mohini S. Mahatme¹, Sachin K. Hiware¹,
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ABSTRACT

Acute Muscle Dystonia (AMD) due to medication error is rarely reported in the literature. We are reporting a case of adverse drug reaction due to a single dose of haloperidol. Patient was free from any psychiatric illness and still he developed AMD with use of haloperidol because of medication error. The patient recovered completely from AMD symptoms in one hour after receiving the treatment. This case report intends to improve the awareness among clinicians to be cautious while writing the prescriptions.

Keywords: Acute muscle dystonia, Haloperidol, Medication error**INTRODUCTION**

Acute Muscle Dystonia (AMD) is one the major dose limiting extrapyramidal adverse effect seen with antipsychotic drugs; more prominent with high potency drugs like fluphenazine, haloperidol, pimozide etc. It is characterized by spasm of muscles of tongue, face, neck and back; occurs with initiation of neuroleptic therapy particularly within 48 hours of a single dose or at first week of therapy.¹ It is especially common in young men. It is treated with one of the central anticholinergics like promethazine or diphenhydramine or benztropine which is injected intramuscularly. It clears the reaction within 10-15 minutes.²⁻⁴ In our case, patient was devoid of any psychiatric illness and still he suffered AMD with use of haloperidol because of bad and illegible hand-writing of prescription by general practitioner and wrong interpretation of prescription by the pharmacist. Data regarding such type of adverse drug reactions are very scanty in the literature. Hence, we thought it worthwhile to report this case.

CASE REPORT

A seventeen year old male visited out patient department in tertiary referral centre. The patient presented with history of spasm of linguo-facial muscles, torticollis and tongue thrusting features suggestive of AMD since morning (Figure 1). The physician diagnosed provisionally as AMD. Accordingly, detailed history was sought regarding his illness and treatment undergoing. Patient and his relatives denied of any psychiatric illness and drugs taken for it. On elaborative history, patient revealed that a day before he was prescribed some tablet for generalized weakness and mouth ulcer by the general practitioner. When asked for the prescription, it was found that tablet seridase was prescribed. On examining the strip of tablet, it was observed that pharmacist had mistakenly dispensed him tablet serenace (haloperidol). Hence, it was inferred that the drug haloperidol was responsible for his AMD. Because of wrong interpretation of prescription by the pharmacist, patient received wrong drug and suffered from AMD. After confirmation of diagnosis, he was treated with

injection promethazine, 25 mg intramuscularly and his symptoms disappeared completely after one hour.



Figure 1: Acute muscle dystonia due to haloperidol.

DISCUSSION

The pathogenesis of AMD is still unclear.⁵ In patients aged 10-19 years, the risk of acute muscle dystonia is high but it decreases linearly with advanced age. Since all antipsychotics bind to D₂ receptors, the blockage of these receptors in the caudate, putamen and globus pallidus is partly responsible for causing AMD. As D₂ activity decreases with age, the propensity of these drugs to cause AMD in elderly patients is diminished.⁶ Though exact pathology is unknown, AMD may involve striatal dopaminergic and cholinergic function.

In the present case, the patient had developed AMD due to bad and illegible writing of prescription by general practitioner and wrong interpretation by pharmacist. In India most of the drugs are prescribed by their brand name except in government hospitals. Brand name is the name assigned by the manufacturer.⁷ The problem of confusing brand names is common all over the world. In the present scenario, several brand names are strikingly identical, similar looking (orthographic), or similar sounding (phonological) which can lead to confusion. This creates much confusion while dispensing of drugs to the patients because of close similarity in the spellings/ nomenclature of the brand names. Similar drug names, either in writing or in speaking, account for approximately 15% of all reports to USP's MER Program.⁸ Therefore, the manufacturing companies, prescribing doctors and dispensing pharmacists can play an important role in

preventing "wrong prescribing" due to similarities in brand names.⁹ Hence, only the team work will prevent the possible confusion while prescribing and dispensing the prescriptions. In 2004, the U.S. Pharmacopoeia released 'Use caution, avoids confusion', an updated list highlighting confusing brand name sets and identified more than 750 unique drug names that have been reported to the USP Medication Errors Reporting (MER) Program. WHO (1997) has recommended that drugs should be prescribed by their generic name as it minimizes confusion and the cost.¹⁰

This case states that because of medication error and close similarity in the spellings/nomenclature of the brand names, patient unnecessarily succumbed to AMD. This indicates that greater precautions should be taken by the drug manufacturers, physicians, patients and pharmacists to avoid such kind of medication error. This will prevent the occurrence of such avoidable adverse drug reactions. We hope that our case report will improve the awareness among clinicians to be cautious while writing the prescriptions. Change is possible but 'will' to change is required. Let us just do it and it will yield some fruitful results.

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REFERENCES

1. Rupniak NJ, Jenner P, Marsden CD. Acute dystonia induced by neuroleptic drugs. *Psychopharmacology* 1986; 88: 403-19.
2. Tripathi KD. Antipsychotic drugs. *Essentials of medical pharmacology*. 7th ed. Jaypee Brothers Medical Publishers; 2013. p. 444.
3. Meyer JM. Pharmacotherapy of psychosis and mania. In: Brunton LL, Lazo JS, Parker KL, editors. *Goodman & Gilman's the pharmacological basis of therapeutics*. 11th ed. McGraw Hill; 2006. P. 417-456.
4. Caroff SN, Hurford I, Lybrand J, Campbell EC. Movement Disorders Induced by Antipsychotic Drugs: Implications of the CATIE Schizophrenia Trial. *Neurol Clin*. 2011 February; 29(1): 127-viii. doi:10.1016/j.ncl.2010.10.002
5. Tarsy D, Simon DK. Dystonia. *N Engl J Med* Aug 24;2006 355(8):818-829.
6. Harten PV, Hoek HW, Kahn RS. Acute dystonia induced by drug treatment. *Br Med J* 1999;319:623-26
7. Tripathi KD. Introduction, routes of drug administration. *Essentials of medical pharmacology*. 7th ed. Jaypee Brothers Medical Publishers; 2013. p. 3.
8. Use caution, avoid confusion. USP Quality Review; No. 79, April 2004. Accessed on February 18, 2011 available on: <http://www.usp.org/pdf/patientSafety/qr792004-04-01.pdf>.

9. Rataboli PV, Garg A. Confusing brand names: Nightmare of medical profession. *Journal of Postgraduate Medicine* 2005; 51:13-16.
10. Badar VA, Shrivastava MP, Solanke BP, Pimpalkhute SA. Surveillance of prescription Pattern in Out Patient

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The Antiseptic 2008;105(8);379-80.

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