

Carbamazepine-induced dystonia, a case report

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Abstract

Drug-induced dystonic reactions are a common presentation to the emergency department and typically occur with drugs like chlorpromazine, haloperidol and metoclopramide. There are few reports in literature of dystonic reactions caused by antiepileptic drugs. We report a case of carbamazepine-induced dystonic reaction in a young man with post-traumatic epilepsy.

INTRODUCTION

Drug-induced dystonic reactions are a common presentation to the emergency department. They occur in up to 1% of patients given the antiemetics metoclopramide or prochlorperazine.¹ Dystonic reactions may also occur with antipsychotics², lamivudine³, and various antiepileptic drugs including phenytoin.⁴

Carbamazepine is one of the most widely prescribed antiepileptic drugs in Nigeria and worldwide. Dystonic reactions induced by carbamazepine are said to be rare; this is the first case observed in our Centre, thus the reason for this report.

CASE REPORT

The patient was a 31-year-old polytechnic lecturer who developed post-traumatic epilepsy 4 months after a road traffic accident. He was well before the incident and there was no family history of involuntary movements. Electroencephalography done shortly after one of the seizures was suggestive of focal epilepsy. Based on this finding, he was commenced on carbamazepine tablets 200 mg bid a month before this presentation, with cessation of the seizures.

He presented with a few hours history of involuntary movements consisting of sideways turning of the neck and repeated protrusion of the tongue. The movements were restricted to the said areas and the patient did not report any urge to perform these movements. The patient was taking only carbamazepine, and was not on any antiemetics, antipsychotics, cold remedies, or herbal medications. These abnormal movements ceased with the administration of trihexyphenidyl and withdrawal of carbamazepine.

DISCUSSION

We feel that it is important to report this case of rare adverse reaction to carbamazepine because it is about the most commonly used antiepileptic drug and also in manic-depressive syndrome. Although drug-induced dystonia is a common adverse reaction to antipsychotics² and antiemetics⁵, these reactions are far less common with anticonvulsants. Although some cases of drug-induced dystonia have been reported with phenytoin⁴, tiagabine⁶, and gabapentin⁷, reports of similar reactions linked to carbamazepine use are fewer.⁸⁻¹² It is also difficult to ascertain that these reactions are due to toxic levels of carbamazepine in the blood, as studies have shown both increased and normal drug levels.⁹⁻¹² It is difficult to relate the reaction in this patient to drug toxicity as the serum level of carbamazepine was not measured. Nevertheless, there was no indication of overdosing in this patient. Our hypothesis is that this reaction is likely to be idiosyncratic and genetic factors may play an important role. Another consideration is the possibility of contamination of the drug with other substances during manufacturing. This may seem far-fetched, but in Nigeria, drugs are sourced from many different countries with varying levels of manufacturing practices and quality control.

In conclusion, it is important for physicians to be aware that carbamazepine may cause drug-induced dystonic reactions, although the mechanism for this reaction is unclear. Pharmacogenomics may help to solve this dilemma in the future.

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