

Albendazole-induced dystonic reaction: a case report

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Drug-induced dystonic reactions are a common presentation to the emergency department and typically occur with drugs like chlorpromazine, haloperidol and metoclopramide. There are no reports in the literature of dystonic reaction caused by albendazole. We report a case of albendazole-induced acute dystonic reaction whose symptoms completely resolved after the discontinuation of the drug. Even though dystonia side effects of albendazole are rare, it can induce an alarming dystonia in some sensitive children. The mechanism of dystonia is unclear.

Key words: albendazole, acute dystonic reaction, children.

Drug-induced dystonic reactions are a common presentation for admission to the emergency department. Dystonic reactions may occur with antipsychotics, antidepressants, antiemetics, antimalarials, and various antiepileptic drugs^{1,2}. Albendazole is one of the most widely prescribed anthelmintic and anti-worm drug worldwide. Nausea, vomiting, constipation, thirst, dizziness, headache, hair loss, and pruritus are the common adverse effects of albendazole³.

A review of the literature shows that albendazole-induced acute dystonic reaction development has not been reported previously. In this report, we present a case with albendazole-induced acute dystonia.

Case Report

A previously healthy, nine-year-old boy was admitted to the emergency department because of a few-hours history of involuntary movements consisting of sideways turning of the neck and protrusion of the tongue. There was no history of a recent infection or trauma. His parents were non-consanguineous and the family history was unremarkable. According to the mother, he had taken oral albendazole 400 mg for worm infestations four hours before the movements began. The patient was taking only oral albendazole, and was not on any antiemetics, antipsychotics or other medications.

Body temperature, heart rate, respiratory rate, and blood pressure were in normal limits for

his age. Except for the involuntary movements, the physical and neurological examinations were normal.

Laboratory findings including blood count, electrolytes, liver and renal function tests, and urinalysis were normal. His cranial computed tomography and electroencephalography were evaluated as normal.

An albendazole-induced acute dystonic reaction was considered. The symptoms disappeared shortly after intravenous injection of diazepam, and the drug was discontinued. No further dystonic reaction was noticed after stopping albendazole.

Discussion

Drug-induced acute dystonia can occur secondary to antipsychotics, antiemetics and other drugs, and it may develop in an early stage of treatment¹. There have been several case reports of acute dystonia in patients being treated with different drugs, such as metoclopramide, chlorpromazine, haloperidol, flunarizine, olanzapine, phenytoin, chloroquine, buspirone, and cocaine^{1,4,5}.

The dystonia may appear in all muscle groups, but is observed mainly in the head and neck area. This may lead to a variety of forms of dystonia, such as torticollis, trismus, "mouth opening" dystonia, grimacing, dysarthria, oculogyric crisis, blepharospasm, and swallowing difficulties. The pathogenesis of acute dystonia remains unclear. Postulated

mechanisms include a compensatory dopamine release from presynaptic terminals in response to blockade of postsynaptic dopamine receptors, and upregulation or increased sensitivity of postsynaptic receptors in response to diminished quantities of dopamine^{1,6}.

Albendazole is an anthelmintic or anti-worm drug, and its principal mode of action is by its inhibitory effect on tubulin polymerization, which results in the loss of cytoplasmic microtubules⁷. However, the effect of albendazole on the dopamine receptor is not confirmed yet. Albendazole may cause dizziness, headache, fever, nausea, vomiting, or temporary hair loss. In rare cases, it may cause persistent sore throat, allergic reactions, seizures, vision problems, dark urine, stomach pain, easy bruising, mental/mood changes, very stiff neck, or change in urine output. Hepatic and bone marrow toxicity is also possible^{1,8}.

To our knowledge, no albendazole-induced dystonia was reported previously in the literature. We describe herein an acute dystonic reaction in a nine-year-old boy as a side effect of albendazole. In our patient, acute dystonia reaction developed after the administration of albendazole. This patient is the first case observed in the literature, and thus the reason for this report.

A diagnosis of albendazole-induced acute dystonic reaction was made after excluding other possible causes of dystonia. Our case was diagnosed as albendazole-induced acute dystonic reaction with his history of albendazole administration, because he was conscious and had no prior medical problems or progressive symptoms, and showed a good response to diazepam.

In conclusion, albendazole is widely used as an antihelmintic or anti-worm medication in childhood. Despite its reported safety, it may have the potential to cause extrapyramidal side effects in childhood even at the recommended dosages.

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