

## **METOCLOPRAMIDE-INDUCED DYSTONIA; CASE REPORT**

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### **ABSTRACT**

#### **Aim**

In this case, we aimed to describe the acute dystonia disease developed after the use of metoclopramide in an 8-year-old boy who started with complaints of nausea and vomiting.

#### **Case Report**

An 8-year-old boy was brought to our emergency department by his family because of a sudden onset of postural disorder about 2 hours after ingesting metoclopramide oral solution. The patient's physical vision was torticollis (deviated neck to the right), mouth deviated to the left, left elbow flexed and left wrist externally rotated. His left hand was clenched into fists. Our patient was admitted to the hospital for treatment and observation after receiving the opinion of the pediatrician.

#### **Conclusion**

When using metoclopramide hydrochloride in adult or pediatric patients in our emergency departments, we should be very careful and be prepared for its side effects. Acute dystonia muscle disease after metoclopramide, which is used very frequently, is a condition that must be kept in mind of emergency medicine physicians.

**Keywords:** Metoclopramide, Acute dystonia, Pediatric emergency medicine.

## INTRODUCTION

Dystonia, which is characterized by a movement and posture, causes involuntary movements in the muscles. Although it is the most common movement disorder after dystonia, Parkinson's and essential tremor diseases, it is not well known by the society. Dystonia, which is mostly seen in adults, can also be seen in young people and children in some cases. In this case, we aimed to describe the acute dystonia disease developed after the use of metoclopramide in an 8-year-old boy who started with complaints of nausea and vomiting.

## CASE REPORT

An 8-year-old boy was brought to our emergency department by his family because of a sudden onset of postural disorder about 2 hours after ingesting metoclopramide oral solution. The general condition of the patient was good, he was conscious, oriented and cooperative, and his GCS was 15. In the vital follow-ups of the patient's forehead, blood pressure was 100/50 mm Hg, heart rate was 75 beats/min, respiratory rate was 18 breaths/min, and saturation at room air was 99%, fever 36.6%. No pathology requiring acute intervention was detected in the CBC, extensive biochemistry and blood gases taken from the patient. The patient's physical vision was torticollis (deviated neck to the right), mouth deviated to the left, left elbow flexed and left wrist externally rotated. His left hand was clenched into fists. There was a milder motor deficit in the right arm, right hand, and right wrist compared to the left. His right shoulder was slightly tilted back. In the lower extremities, he was constantly moving his feet. In the anamnesis taken from the mother of the child, we learned that the child had complaints of nausea and vomiting and had used metoclopramide hydrochloride oral suspension, which was prescribed by the family doctor 2 days ago, 3 times a day. Our patient was admitted to the hospital for treatment and observation after receiving the opinion of the pediatrician. We learned that the patient's dystonic symptoms disappeared after IV beep and he was discharged one day later with full recovery( Figure 1).



**Figure 1.** Dystonia image of the patient

## DISCUSSION

As emergency physicians, we are not prepared for the undesirable side effects of metoclopramide, which is a frequently used agent for nausea and vomiting. Although not well known by the society, dystonia is a common movement disorder. The vomiting center receives signals from the vestibular labyrinth, the gut, and the chemoreceptors in the postrema region of the medulla oblongata, where dopamine, serotonin, histamine, and muscarinic receptors are located. When these receptors are activated by their own neurotransmitters, symptoms of nausea and vomiting increase, while specific antagonists are used to relieve symptoms (1).

Metoclopramide hydrochloride, which is widely used in our emergency departments, is a selective dopamine receptor antagonist that is frequently used in the treatment of gastrointestinal and neurological disorders such as nausea, vomiting, gastroparesis, gastroesophageal reflux disease, dyspepsia, neurogenic bladder and migraine headaches due to its antagonistic activity against central and peripheral dopamine receptors(2,3).

The antagonistic effect of metoclopramide on dopamine receptors in the basal ganglia is associated with extrapyramidal side effects such as tardive dyskinesia, akathisia, and drug-induced parkinsonism(2). The incidence of acute dystonic reactions caused by metoclopramide in children has been reported to be as high as 25%(4). Young adults, women, children, patients with a family history of neurological disorders, patients taking neuroleptics, and patients with family members of acute dystonic reactions due to metoclopramide are at particularly high risk of developing metoclopramide-induced acute dystonic reactions (1,4-6).

Gastrointestinal symptoms, in particular, are among the frequent reasons for admission to the emergency department. When using metoclopramide hydrochloride in adult or pediatric patients in our emergency departments, we should be very careful and be prepared for its side effects. Acute dystonia muscle disease after metoclopramide, which is used very frequently, is a condition that must be kept in mind of emergency medicine physicians

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