

# Cases Report of a Medication Error by Look-a-Like Packaging: Metoclopramide and Paracetamol Suppositories

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## Abstract

Medication errors are Unlike adverse drug reactions (ADRs) or adverse drug events (ADEs); mistakes by healthcare personnel cause them. We reported two cases of developed symptoms of Metoclopramide over-dose. Metoclopramide was given as Paracetamol due to look-a-like packaging. In Emergency Departments, reviewing the patient's medications to prevent look-a-like complications should be done for all patients with suspected drug toxicity.

## Keywords

Look-A-Like, Metoclopramide, Paracetamol, Children, Saudi Arabia

## 1. Case 1

A 16-month-old boy is medically free. He was seen in private hospital complaining of fever and Upper Respiratory Tract Infection (URTI), given antipyretic suppositories and oral antibiotics. He received an antipyretic on the first day at 9:00 am, 2:00 pm, and 6:00 pm. After the last dose of the antipyretic patient became dizzy, weaker, and dropped his tongue. The parent went to another private hospital where he was given IV fluid and referred to our hospital for further workup and rule out meningitis vs. encephalitis. Medications were reviewed in our Emergency Department; the patient received metoclopramide 10 mg suppositories instead of Paracetamol. Both had similar package colors.

O/e Afebrile, GCS = 15/15, Pink, well hydrated;

BP = 126/79, HR = 132 BPM, Oxygen Saturation 98% (Room Air) RA, Random Blood Glucose 90 mg/dl. Temperature 36.9;

Normal neurological examination;  
Cardiopulmonary: Normal;  
Abdomen: Normal physical exam.

Investigation:

1) Electrolytes: s-k + 3.33 mmol/l, s-Na 136 mmol/l, others were normal.

2) CBC, LIVER FUNCTION, VBG, ECG; all were normal for his age.

Treatment: he was admitted for observation and vitals monitors as per the toxicology center and given IV fluids and one dose of Paracetamol.

After 24 hours, he was discharged in normal condition.

## 2. Case 2

A five-month-old girl, full term, was delivered by elective caesarian section due to breech presentation. No NICU admission.

The patient was on her usual health status till yesterday as she developed a runny nose and one spike of fever (subjective by mother) at 11:00 am. The mother did a cold shower and gave the patient a suppository antipyretic (Paracetamol). After one hour, the mother noticed the baby became tonic, head tilted to the left side with up-rolling eyes.

No history of trauma, cough, or change in bowel habits or urine. Other systemic review was unremarkable.

She was fully vaccinated for her age and normal development.

On examination: At presentation, the baby was tonic with eyes up-rolling.

Pulse rate 206 BPM, SPO2 93%, Temperature was 36 after diazepam 5 mg suppository here vital became normal with SPO2 98%.

Normal cardiopulmonary exam;

Normal neurological exam, with flat anterior fontanelle;

Normal musculoskeletal findings; Normal female genitalia.

Investigations: normal electrolytes and VBG, Normal Complete Blood Counts (CBC). Normal CRP, Normal CSF, and Brain image.

She was admitted for observation, and after reviewing medications given at home, she received a 5 mg Metoclopramide suppository instead of a Paracetamol suppository, as Paracetamol and Metoclopramide were similar in package color.

The patient was discharged after observation, and normal labs were in good condition.

## 3. Introduction

For more than ten years after the landmark publication of the American Institute of Medicine, medication errors remain the most important cause of patient morbidity and mortality. They have remained the focus of attention of health care quality experts [1] [2] [3] [4] [5].

Medication errors are unlike adverse drug reactions (ADRs) or adverse drug events (ADEs); mistakes by healthcare personnel cause them [6].

Histamine H2—receptor antagonists and metoclopramide were the most re-

ported medication errors in the United States poison center for 12 months of age or less [7].

Vomiting is a common symptom of many etiologies and adversely affects the well-being of children. Most time, vomiting could resolve spontaneously or with the treatment of etiology. Treatment of vomiting is vital as it reduces anxiety in the child and parents and allows the successful administration of drugs, oral rehydration salts, and other fluids [8].

The antiemetic effect of metoclopramide is due to its antagonism action on central and peripheral dopamine receptors [9]. The onset of the pharmacologic activity of metoclopramide is 1 to 3 minutes following an IV dose, 10 to 15 minutes following IM administration, and 30 to 60 minutes following an oral dose. The Pharmacologic effects of metoclopramide persist for 1 to 2 hours [10].

#### 4. Discussion

Metoclopramide's most common side effects are drowsiness, nervousness, and irritability [11]. Extrapyramidal reactions occur in 1 of 500 patients. These dystonic reactions are more common in children, are fully reversible, and are associated with overdoses [11]. Unintentional overdose with metoclopramide has resulted in seizures and lethargy. Methemoglobinemia has been reported in premature and full-term neonates when used metoclopramide intramuscularly for three or more days at the recommended dose (1 to 2 mg/kg) [9] [10].

We report two cases of metoclopramide toxicity following inappropriate drug use due to a look-a-like error.

Kirkpatrick *et al.* [12] report that dystonia is a rare side effect when using metoclopramide in its usual dose with children.

In Albania [13], 17 cases were diagnosed with clinical symptoms of cervical freezing and contractile bodywork associated with sleepiness due to metoclopramide overdoses.

Cousins *et al.* [14] have shown that the most frequent types of medication errors involve the time of administration, the dose of the drug, the wrong medicine, and the rate of administration of the intravenous drug metoclopramide.

#### Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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