

# Accidental Ingestion of Calamine Lotion Mistaken for An Antacid: A Case Report

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## Abstract

Calamine lotion is commonly used to treat mild skin conditions. Accidental ingestion of calamine has been very rarely reported in the literature. Here, we report a case of a 34-year-old female who mistakenly ingested calamine lotion, believing it to be an antacid due to its similar pink packaging. The patient presented with gastric irritation, nausea, and anxiety ("gabrahat"). The patient was managed effectively with reassurance and symptomatic treatment, and the outcome was favorable. This case underscores the importance of clear medication labelling and patient education to prevent similar incidents.

**Keywords:** patient; clinical; paediatric

## Introduction

Accidental ingestion of medications due to packaging similarities is a significant concern in healthcare [1]. Calamine lotion is commonly used to treat mild skin irritations such as sunburn, insect bites, poison ivy, and other rashes. Its effectiveness as a moisturizer and anti-itch treatment makes it a staple in many households. However, the pink colour and sometimes similar packaging to certain oral medications, such as antacids, can lead to confusion and accidental ingestion [2]. According to the brand label, the main active ingredients of Calamine lotion are zinc oxide, which has antibacterial, mildly astringent, anti-pruritic, and antiseptic properties, and ferric oxide, which gives calamine its characteristic pink colour. Other minor ingredients include bentonite magma, diphenhydramine, calcium hydroxide, glycerin, xanthan gum, purified water, propylene glycol, castor oil, glyceryl stearate, and polysorbate 80 [3,4]. Except propylene glycol, which can cause serious side effects like CNS depression and lactic acidosis, the side effects of most of the other constituents are often mild and involve the gastrointestinal system when there is accidental ingestion in the pediatric age group or adults [3,4]. This case report highlights an incident where a 34-year-old patient ingested calamine lotion, mistaking it for an antacid, and discusses the ensuing medical management and preventive measures. This incident underscores the importance of clear

medication labelling and patient education to prevent similar occurrences.

## Patient Information and Presentation

A 34-year-old Indian female with no past medical history presented to the emergency department with symptoms of gastric irritation, nausea, and a feeling of unease ("gabrahat"). She reported that she had mistakenly ingested calamine lotion two hours earlier, believing it to be an antacid due to its pink packaging. The patient reported that her symptoms began approximately 30 minutes after ingesting about 5 ml of calamine lotion. The symptoms prompted her to seek medical attention at the emergency department two hours post-ingestion. Upon examination, the patient was conscious and oriented with no signs of pallor, icterus, cyanosis, or lymphadenopathy. Her blood pressure was 114/72 mmHg, Pulse was 78 beats /min, and temperature 98.30 F.

## Clinical Course and Management

### Diagnostic Assessment

The absence of severe symptoms and the clear history provided by the patient eliminated the need for a differential diagnosis. The primary diagnostic challenge was identifying the ingested substance, which was resolved through patient history. The final diagnosis was accidental ingestion of calamine lotion.

### Therapeutic Intervention

The patient was reassured and was treated with an injection of Pantoprazole 40 mg IV stat and an injection of Ondansetron 4 mg IV stat. The interventions were effective in resolving her symptoms. The patient was advised to monitor her symptoms and to revisit the next day for a follow-up.

### Follow-up and Outcomes

The patient's symptoms resolved ultimately within a day. There were no complications or adverse effects from the ingestion or treatments. The patient reported feeling well at follow-up, and her medications were discontinued.

### Discussion

Accidental ingestion of calamine lotion is uncommon. This case highlights the potential risks associated with packaging similarities between topical and oral medications, such as Calamine lotion and Antacid, which come in pink packaging. Calamine lotion, which contains zinc oxide and ferric oxide, is widely used for its soothing and anti-itch properties in treating mild skin irritations like sunburn, insect bites, and rashes. Despite its non-toxic nature, it can cause gastrointestinal symptoms when ingested in insignificant amounts, as seen in this case. However, it can be toxic if consumed in higher doses. To date, only one case has been reported in which a 14-year-old female child accidentally consumed 50ml of lactocalamine and developed neurological disturbances such as abnormal body movements, up-rolling of eye-balls, associated with frothing from the mouth and urinary incontinence. This was also associated with abdominal pain and vomiting. The patient was managed with antiepileptics and supportive therapy and was discharged with appropriate treatment advice and follow-up [6]. There have been numerous incidences of serious adverse events due to accidental exposure to look-alike and sound-alike (LASA) drugs. It is reported that around 25% of pharmaceutical errors are caused by LASA drugs, often resulting from a lack of communication and patient education [7]. A notable case highlighting the critical importance of proper medication labelling involved a 60-year-old male patient with post-coronary Artery Bypass Surgery. The patient, found to have metabolic acidosis, was mistakenly administered potassium chloride instead of sodium bicarbonate due to similar-looking ampules and labelling. This error resulted in bradycardia and subsequent cardiac arrest. Prompt resuscitation efforts were required to

stabilize the patient [8]. When medications look similar, the risk of medication error increases, especially if they have similar shapes, sizes, and colours. For instance, a few generic preparations of Enalapril, Telmisartan, Glimepiride and Metoprolol are all manufactured as round white tablets of nearly the same size. This similarity can lead to mix-ups that are potentially harmful [9]. Furthermore, when different classes of drugs share the same name or are sound alike, produced and marketed by different companies, it can lead to confusion and potential danger. For example, the brand name "Medzol" is used for both Midazolam (Sedative) and Pantoprazole (ulceroprotective). It is appalling to note that different pharmaceutical companies market Metronidazole oral suspension (Antibacterial and antiparasitic), Itraconazole capsules (Antifungal), and Albendazole tablets (antihelminthic) as "Medzole". Likewise, Lenalidomide (anticancer) and Linagliptin (antidiabetic) are being sold under the brand name 'Linamac' [10]. Errors in prescribing and dispensing such drugs, which belong to entirely different therapeutic classes, will inevitably result in undesirable effects and harm to the patient. Our case report underscores the importance of clear labelling and patient education to prevent significant health risks associated with accidental ingestions.

**To prevent incidents of medication confusion, it is crucial to establish checkpoints at multiple levels involving doctors, pharmacists, and patients. Here are some professional suggestions**

### Establishing effective Doctor-Patient Communication

Physicians should take the time to explain the prescribed medications thoroughly; highlighting risks of misuse using some real-life situations can serve as a practical example for the patients to understand better about the medication.

### Patient Education

Educating patients empowers them to take an active role and reduces the likelihood of medication errors. Advise patients to seek information about their medications actively. Encourage them to ask questions and understand the proper use of their prescribed medicines.

### Pharmacist Education

Pharmacist provides an additional layer of reinforcement of information about the medication, complementing the information given by doctors,

Educate pharmacists to provide detailed information about their medications, including their proper use.

### Role in updating and disseminating information

If one incident happens in a physician's practice, it can happen anywhere. Recognising such incidents, especially with look-alike, sound-alike (LASA) drugs. The practising physicians must regularly update information on these drugs and notify relevant authorities to ensure the message reaches a broader audience. It helps in increasing awareness and preventive measures at a systemic level.

This case serves as a reminder of the need for medication safety education for patients and healthcare providers. Healthcare providers must be vigilant, and manufacturers should consider packaging designs that minimize the risk of confusion.

### Conclusion

The accidental ingestion of calamine lotion in this case led to minor gastric symptoms that resolved with supportive care. It is not a standout problem; there are numerous incidents of accidental administration/consumption happening all over the world because of look-alike and sound-alike (LASA) drugs. Clear communication and patient education are crucial in preventing similar incidents. This case highlights the need for vigilant labelling practices and the importance of patient awareness to avoid such errors. By implementing these suggestions, we can create a more robust system that minimizes the risk of medication confusion and enhances patient safety.

### Declarations

#### Informed consent

The authors certify that they obtained appropriate patient consent before publishing the case report.

### Conflict of interest

Nil.

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