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Case Report: Nitrofurantoin-Induced Vomiting

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ABSTRACT

Nitrofurantoin, a commonly used antibiotic for urinary tract infections (UTIs), can, in rare cases, induce significant nausea and vomiting. We present a case of a 30-year-old woman who developed intractable vomiting shortly after initiating nitrofurantoin therapy for a UTI. This report highlights the importance of considering nitrofurantoin as a potential cause of vomiting in patients with recent antibiotic use, even in the absence of typical gastrointestinal side effects.

INTRODUCTION

Nitrofurantoin is generally well-tolerated, with the most common side effects being nausea, dyspepsia, and abdominal pain. Severe vomiting, though uncommon, has been reported as a potential adverse reaction, particularly in women and with higher doses. The exact mechanism of nitrofurantoin-induced vomiting remains unclear, but it is thought to involve irritation of the gastric mucosa and central nervous system effects on the vomiting reflex (1-5).

CASE PRESENTATION

A 30-year-old woman with a history of recurrent UTIs presented with dysuria, frequency, and urgency of urination. Urinalysis confirmed a UTI, and she was prescribed nitrofurantoin 100mg four times daily. Within 8 hours of taking the first dose, she developed severe nausea and projectile vomiting, leading to dehydration and electrolyte imbalance. She denied fever, diarrhea, or abdominal pain. She had no known allergies or recent food intolerances.

Her past medical history was unremarkable except for the recurrent UTIs. She did not take any regular medications or herbal supplements. On examination, she was afebrile with stable vital signs. Physical examination revealed dehydration but no abdominal tenderness or organomegaly.

Laboratory tests revealed mild hyponatremia and hypokalaemia due to dehydration from vomiting. Other biochemical and

hematological investigations were within normal limits. A repeat urinalysis confirmed the UTI, with no evidence of other pathogens or complications.

Given the temporal association between nitrofurantoin initiation and vomiting, and the absence of other likely causes, a diagnosis of nitrofurantoin-induced vomiting was suspected. Nitrofurantoin was immediately discontinued, and supportive care with intravenous fluids and antiemetics (ondansetron) was initiated.

The patient's symptoms gradually improved over the next 24 hours, and she was discharged home with instructions to avoid nitrofurantoin and complete her UTI treatment with a different antibiotic (fosfomycin). She made a full recovery and did not experience any further vomiting episodes.

DISCUSSION

This case highlights the importance of considering nitrofurantoin as a potential cause of vomiting, even in patients who initially tolerate the medication well. Early recognition and discontinuation of the drug are crucial to prevent dehydration, electrolyte imbalances, and potential complications.

Clinicians should be aware of the following key points: The onset of vomiting within hours of initiating nitrofurantoin, as seen in this case, strongly suggests a causal link. Ruling out other common causes of vomiting, such as gastroenteritis, food poisoning, or other infections, is essential for accurate

diagnosis. Several effective antibiotic options for UTIs, such as fosfomycin, trimethoprim-sulfamethoxazole, or cephalexin, can be considered in patients with nitrofurantoin intolerance. Informing patients about potential side effects, including vomiting, and instructing them to report any adverse reactions promptly is crucial for ensuring safe and effective antibiotic use (6-9).

While nitrofurantoin remains a valuable medication for treating UTIs, its potential for inducing severe vomiting should not be underestimated. Close attention to symptom presentation, timely diagnosis, and prompt discontinuation of the drug are essential for optimal patient care and preventing complications. By promoting awareness and vigilance, we can ensure the safe and effective use of this important antibiotic in managing UTIs.

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