



Case Report: Unexplained Presence of Yellow Oval Elements in Stool Mimicking Parasitic Infection in a Patient on Metformin Extended-Release

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Abstract:

This case report presents the clinical history, examination findings, and diagnostic investigations of a 47-year-old female patient who presented with the passage of multiple yellow oval elements in her stool, mimicking a parasitic infection. Despite extensive evaluations and referrals to gastroenterology and endoscopic services, no abnormalities were detected. The report highlights the importance of considering medication-related side effects, specifically ghost tablets, in patients presenting with atypical stool findings to avoid unnecessary investigations and anxiety.

Introduction:

The presence of unusual elements in stool can be alarming and often raises concerns about potential parasitic infections. However, it is crucial for healthcare providers to be aware of alternative explanations, such as medication-related side effects, to prevent unnecessary diagnostic tests and causing patients' anxiety by not telling them a relevant information when prescribing metformin XR (1,2,3). This case report describes a patient who presented with yellow oval elements in her stool, leading to multiple referrals and investigations to determine the underlying cause.

Case Presentation:

A 47-year-old obese woman with a history of Type 2 Diabetes Mellitus presented with a complaint of passing multiple yellow oval capsule-like elements in her stool over the past month. Despite seeking medical advice and undergoing stool examination and upper gastrointestinal scope, no evidence of parasitic infection was found. The patient had recently switched from Metformin 500mg TID to Metformin Extended-Release 750mg BID for better glycemic control. Her medical history was unremarkable except for generalized anxiety disorder, for which she did not take any medication and relied on psychotherapy alone.

Discussion:

The phenomenon "ghost tablet" or "ghost pill" occurs when the outer shell or coating of a medication is not digested and absorbed by the body and is excreted in the stool (4).

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Metformin is an oral medication commonly used to treat type 2 diabetes. It is usually formulated as an extended-release tablet with a non-absorbable shell or coating. The purpose of the coating is to control the release of the drug over time, allowing for a steady and sustained effect.

In some cases, as the active ingredient inside the capsule is being slowly released to the body, the outer shell is expelled in stool without affecting the efficacy of the drug (5).

Upon thorough evaluation and considering the patient's medication history, the presence of yellow oval elements in the stool was attributed to ghost tablets, a common side effect of extended-release metformin which appears in up to 54% of patients taking metformin XR (6). Ghost tablets are remnants of medication that can remain intact and pass through the gastrointestinal tract, often resembling foreign bodies or parasites. Lack of healthcare providers' awareness about this phenomenon can lead to unnecessary examinations and multiple consultations. Additionally, the lack of patient education about the drug and its possible side effects can lead to severe anxiety due to the fear of incomplete absorption of the drug (7).

Conclusion:

This case highlights the importance of considering medication-related side effects, such as ghost tablets, in patients presenting with atypical stool findings. Healthcare providers should be aware of this phenomenon, especially when patients are prescribed extended-release medications like metformin. Adequate patient education can help alleviate unnecessary anxiety, prevent unnecessary referrals, and improve patient satisfaction. Increased awareness among healthcare professionals can also aid in accurate diagnosis and management, ultimately improving patient care and reducing healthcare costs.



(Figure 1) The shape of metformin XR residues (ghost tablet) as yellow oval capsule-like elements

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