



## Introduction

- Bowel preps are commonly Polyethylene Glycol (PEG)- based and allergic reactions are rare and not commonly severe.
- Its chemical formula allows for it to be soluble in water with minimal gastrointestinal absorption, which increases water retention in the colon.
- Wide scale adoption is due to the ability to be manufactured with varying tonicities, typically isotonic and hypotonic.
- Patients, in rare cases, may be allergic to these chemicals, and have severe symptoms such as dyspnea, facial flushing, urticaria, and vomiting.
- We present a rare case of recurrent severe allergic reaction to PEG-based bowel preparations.

## Case Report

- An asymptomatic 60-year-old Caucasian man presented for colon cancer screening and intermittent GI bleeding.

## Case Report

- A PEG-based pill preparation was prescribed to the patient for his colonoscopy.
- Shortly after initiating his prep, he complained of difficulty tolerating the prep and developed generalized pruritus and urticaria.
- He was advised to stop the bowel prep immediately and subsequently responded with conservative treatment with oral Diphenhydramine.
- In light of this adverse reaction, he was prescribed an alternative PEG-based liquid prep, however, the same allergic reaction occurred shortly after initiating the preparation.
- A decision was thus made to use a non-PEG based bowel prep on his third attempt.
- The patient was able to tolerate the prescribed prep without incident and did not have any of the previous symptoms.
- The patient was able to complete his colonoscopy successfully.

## Conclusions

- Severe allergic reactions to Polyethylene Glycol (PEG)- based bowel preparations are quite rare
- Symptoms associated with this condition are dyspnea, facial flushing, urticaria, and vomiting.
- Due to the common use of such preps, such adverse reactions can not only be clinically concerning but also inconvenient as multiple similar preparations may be tried, as in the case of our patient.
- In light of this, alternative non-PEG based bowel preps should be considered if a severe reaction or anaphylaxis is seen with an initial PEG-based preparation.
- Non-PEG based bowel preps such as saline-based preps can provide an effective alternative for such patients.
- Gastroenterologists should be aware of this rare, yet potentially high risk adverse reaction to PEG-based preparations and consider an alternative non-PEG based preparation as a first-line option after initial adverse reaction to mitigate potential recurrent risk.