

SEVERE HYPER-MAGNESEMIA FOLLOWING CLENPIQ USE IN A CHRONICALLY CONSTIPATED PATIENT WITH AGE-APPROPRIATE RENAL FUNCTION

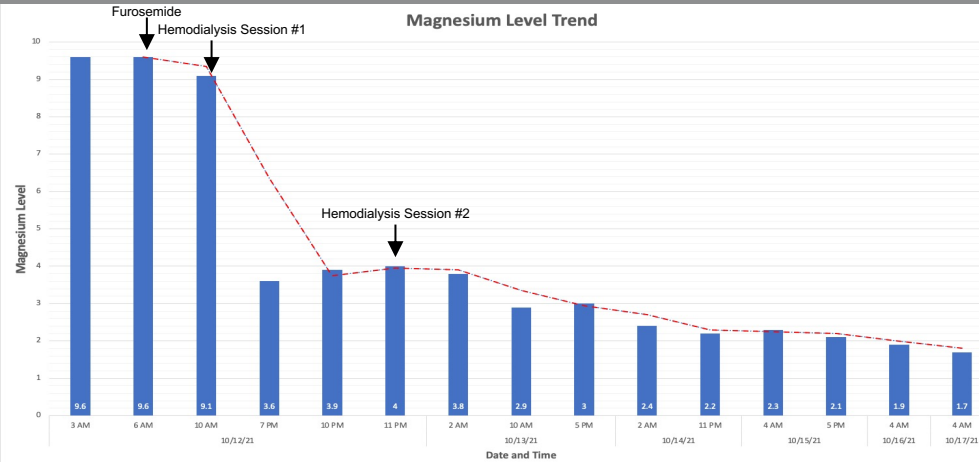
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BACKGROUND

- Hypermagnesemia is a rare but recognized side effect of bowel preparation use that worsens with concurrent gastrointestinal motility dysfunction
- Current consensus guidelines by the United Kingdom note that although Mg-containing bowel cleansers present a risk for hypermagnesemia in patients with stage 4 or 5 chronic kidney disease
- We report a case of severe symptomatic hypermagnesemia resulting from sodium picosulfate/magnesium oxide/citric acid (Clenpiq) bowel preparation in an individual with age-appropriate renal function and chronic constipation



DISCUSSION

- However, these findings were all transient in nature, and normalized within 7 days of use with no apparent clinical effects

CONCLUSION

- When deciding the appropriateness of a particular bowel preparation agent factors to consider include pre-existing risk factors such as kidney disease, heart failure, motility disorders, and allergies
- American Society of Gastrointestinal Endoscopy (ASGE) recommends against the use of magnesium citrate containing agents in elderly patients, patients with pre-existing kidney disease, and in patients on agents which alter renal blood flow or electrolyte status
- Hypermagnesemia can present with a myriad of clinical manifestations and should be in patients with recent ingestion of bowel preparation presenting with altered mental status and hemodynamic instability
- While bowel preparations are typically safe and well-tolerated, one important consideration when selecting an agent is evaluating for co-existing GI disorders such as impaired motility

REFERENCES

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CASE PRESENTATION

- An 82-year-old female with a past medical history of chronic pancreatitis was brought by EMS for altered mental status after being found down in her bathroom
- The patient was recently diagnosed with Barrett's esophagus and was scheduled for a surveillance endoscopy and colonoscopy as an outpatient and took Clenpiq bowel preparation the night before
- On presentation, she was obtunded, hypothermic at 89.3°F, bradycardic at 45 beats/minute, and hypotensive at 73/47 mmHg
- Her laboratory findings were significant for a magnesium level greater than the quantifiable limit >9.6 mg/dL
- Her creatinine was 0.87 mg/dL with a blood urea nitrogen of 16 mg/dL
- She underwent two rounds of intermittent hemodialysis along with an aggressive bowel regimen with improvement of symptoms and was ultimately discharged home at baseline function

List of Commonly Used Magnesium-Containing Bowel Preparation Agents

Generic Name	Brand Name	Recommended Use
Sodium picosulfate/magnesium oxide/citric acid	Clenpiq	1 bottle the evening before, followed by the second bottle the morning of colonoscopy
Sodium sulfate/potassium sulfate/magnesium sulfate	SuPrep	1 bottle the evening before and repeat the morning of colonoscopy
Magnesium Citrate	LiquiPrep	1.5 bottles the evening before and 1.5 bottles the morning of colonoscopy

DISCUSSION

- Clenpiq achieves bowel cleansing by pairing stimulant laxative sodium picosulfate with osmotic laxative magnesium citrate
- In patients with baseline mild (creatinine clearance 60-90 mL/min) and moderate (creatinine clearance 30-60 mL/min) renal dysfunction, Clenpiq was found to cause transient hypermagnesemia peaking on the day of colonoscopy