A Case Of Gluten-Induced Delirium: Using Capsule Endoscopy To Diagnose Occult GI Bleeding

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A case of gluten-induced delirium: Using capsule endoscopy to diagnose obscure GI bleeding

Rachael Starcher MD, Lisa Sanders MD

Case Presentation

Patient
81 year-old male with a CVA one year prior, SSS with a pacemaker, atrial fibrillation on apixaban, and MI with stent placement 6 months prior on clopidogrel

Chief complaint: altered mental status/hypoactive delirium
- Inattentiveness, confusion, and inability to complete daily activities
- Waxing and waning on the day of admission
- ROS otherwise negative

Initial Work-Up
Vitals: 97.5°F, HR 101, BP 107/72
Labs:
- Hgb 12.1 g/dL (down from 14.1 g/dL 1 month prior)
- Cr at baseline
- BUN 82 mg/dL (up from 17 mg/dL 2 months prior)
- Infectious work up negative

Imaging:
- CXR and CT head negative

Hospital Course
- Developed melena, dropping Hgb requiring transfusions
- EGD and colonoscopy negative for bleeding sources

Capsule Endoscopy Diagnoses Half of Obscure GI Bleeding

Diagnostic yield of capsule endoscopy in diagnosing obscure GI bleeding when EGD and Colonoscopy are negative

- Negative study 36%
- Source of bleeding identified 47%
- Results suspicious, but inconclusive 15%

Limitations of small bowel diagnostic tools
- Capsule endoscopy: timeliness of results, subjectivity relies on interpretation
- Push enteroscopy: higher rate of complications without better diagnostic yield when compared to capsule
- CT Angiography: requires brisk arterial bleed >0.5 mL/min
- Radionuclide RBC scan: poor anatomic localization, cannot diagnose pathologic etiology

Case Conclusion

- Capsule endoscopy revealed ulcerative jejunoileitis
- Anti-Gliadin IgG & IgA elevated
- Tissue transglutaminase IgA elevated
- Diagnosed with Celiac Disease from duodenal biopsy (Marsh Type 3b)

Follow Up
- Started gluten free diet.
- 3 months later: improvement in antibodies, stabilization of anemia, significant improvement in mental status

Diagnose Celiac Disease with Capsule

Some providers have suggested using capsule as an alternative to biopsy in certain patients.

Benefits
- Useful for patients unable to undergo EGD
- Less invasive
- Can visualize entire small bowel, which better estimates extent of disease

Characteristic Findings
Celiac Disease has specific findings visible on capsule:
- Scalloping
- Mosaicism
- Micronodularity
- Reduction of folds

Utility of capsule endoscopy in diagnosing CD

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Chart duplicated from Spada et al (2008)4

Take Away Points

1. Capsule endoscopy is a useful tool in diagnosing around half of obscure GI bleeding when colonoscopy and EGD are negative.
2. If left untreated, celiac disease can lead to ulcerative jejunoileitis, which increases risk for bowel perforation, obstruction, and lymphoma.
3. Capsule endoscopy has >96% PPV for diagnosing celiac disease and may have a role in replacing EGD with biopsy in some patients in the future.

References