

Sarcina ventriculi Infection: A Rare Cause of Gastric Outlet Obstruction

Vijayvardhan Kamalumpundi, BS¹; Katelin Durham, MD²; Steven Polyak, MD³; Joseph Laakman, MD⁴; Aditi Reddy, MD³; Xiaocen Zhang, MD³

¹Carver College of Medicine, ²Department of Internal Medicine, ³Division of Gastroenterology and Hepatology, ⁴Department of Pathology, University of Iowa Hospitals and Clinics, Iowa City, IA

Introduction

- *Sarcina ventriculi* is an anaerobic, gram-positive coccus that grows in acidic environments, including the stomach.¹
- *S. ventriculi* infection is associated with delayed gastric emptying and can contribute to the development of gastric ulcers, emphysematous gastritis, and gastric perforation.¹
- We present a rare case of *S. ventriculi* infection causing a gastric mass lesion and leading to gastric outlet obstruction.²

Case Presentation

A 65 year-old man with history of Barrett's esophagus and tobacco use presented to the Emergency Department with progressively worsening abdominal pain, nausea, and vomiting.

- Abdominal CT imaging showed circumferential wall thickening of the pylorus (**Figure 1A**).
- EGD revealed near complete obstruction of the pyloric channel by a protruding friable pyloric mass (**Figure 1B**). This was new compared to one month prior showing a small pyloric channel ulcer with mild narrowing.
- Biopsies of the pyloric mass revealed *S. ventriculi* organisms in the background of reactive gastropathy with no evidence of malignancy (**Figure 1C - 1D**).

Figures

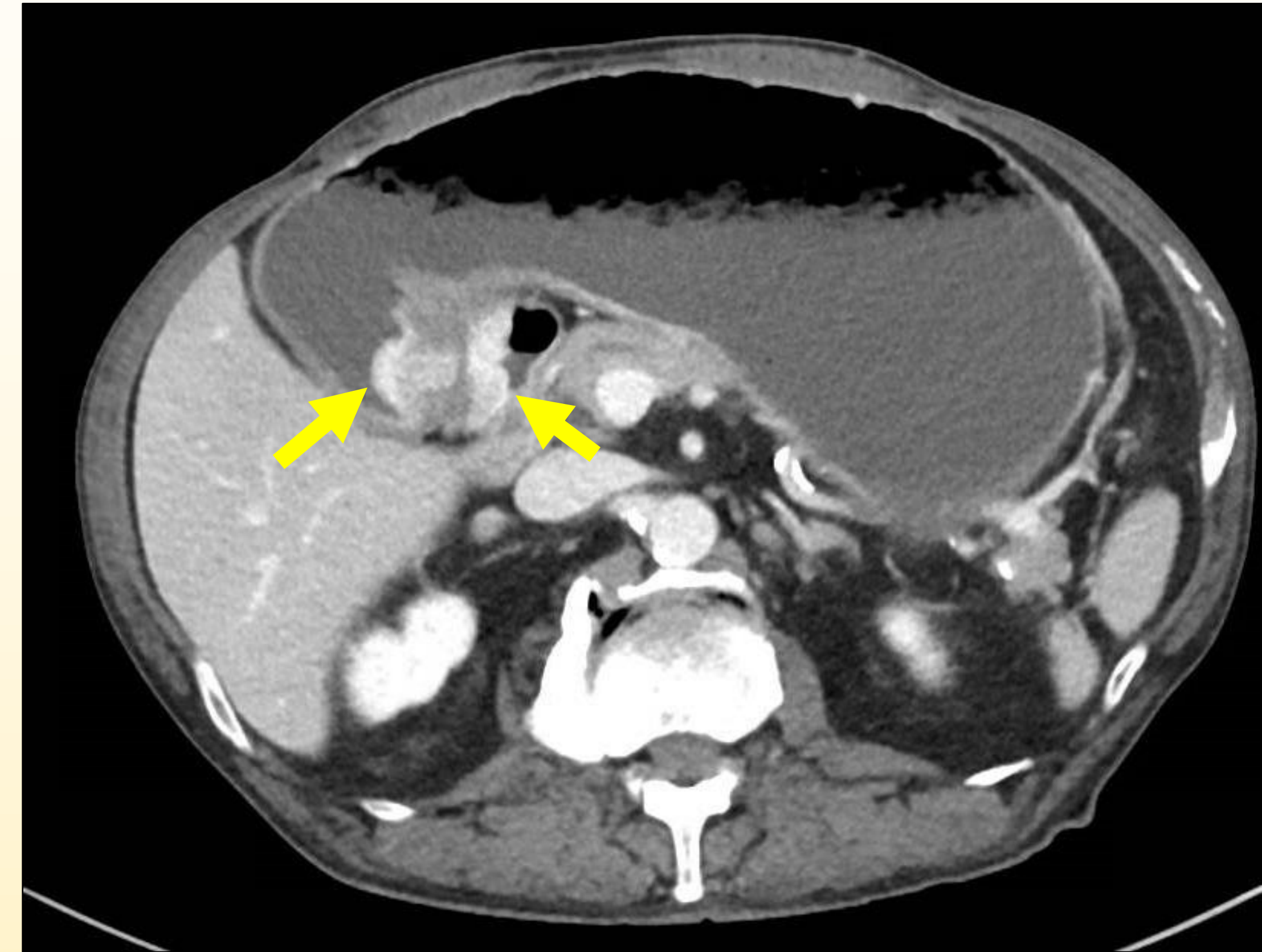


Figure 1A. Abdominal CT axial section showing circumferential nodular wall thickening of the pylorus (yellow arrows) and distended, fluid-filled stomach.

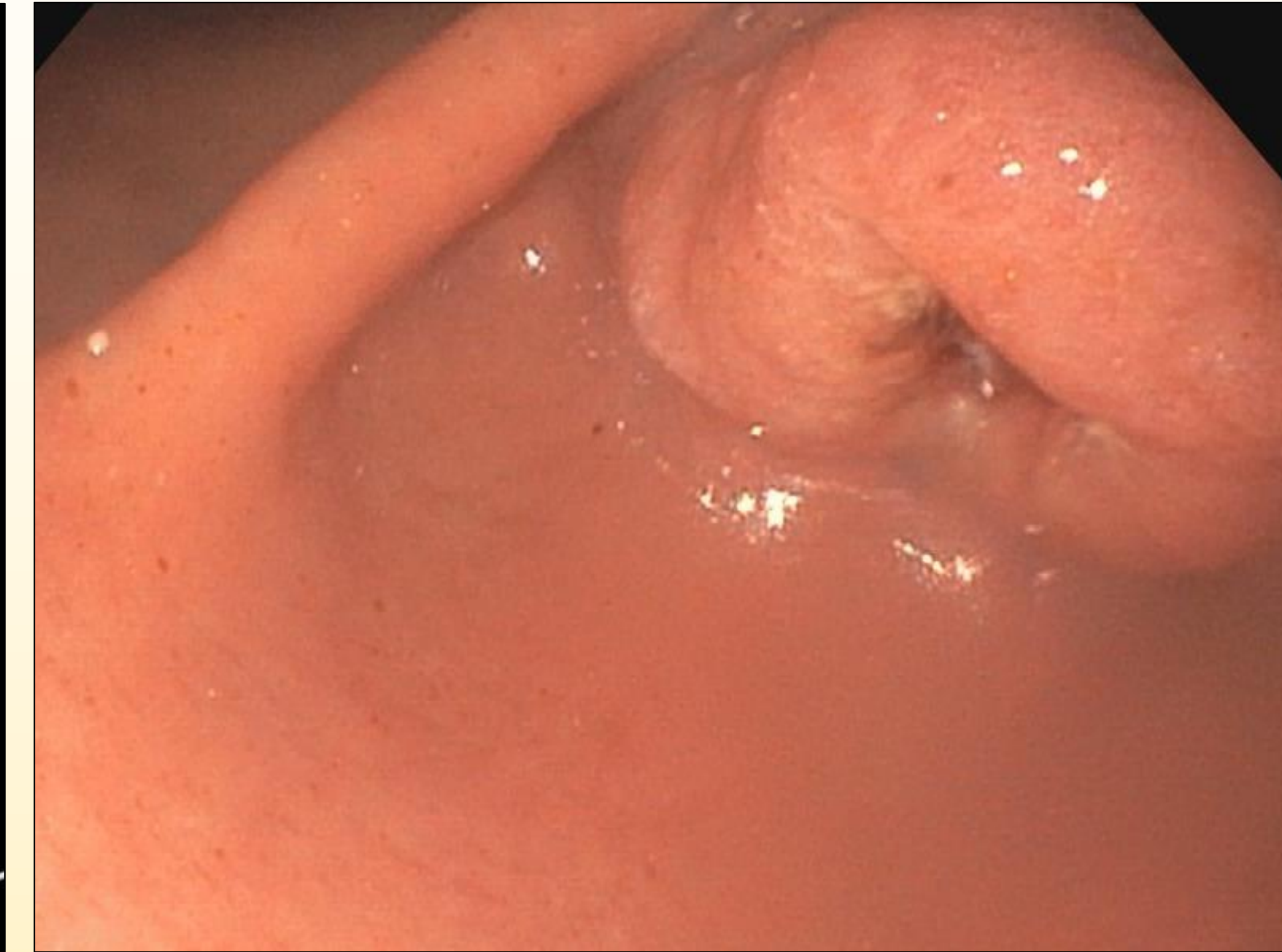


Figure 1B. EGD showing circumferential, protruding, friable mass at the pylorus causing near obstruction of the pyloric channel.



Figure 1C. Low-power view (50x) of the pyloric mass revealed polypoid reactive gastropathy with *S. ventriculi* organisms present on the mucosal surface.

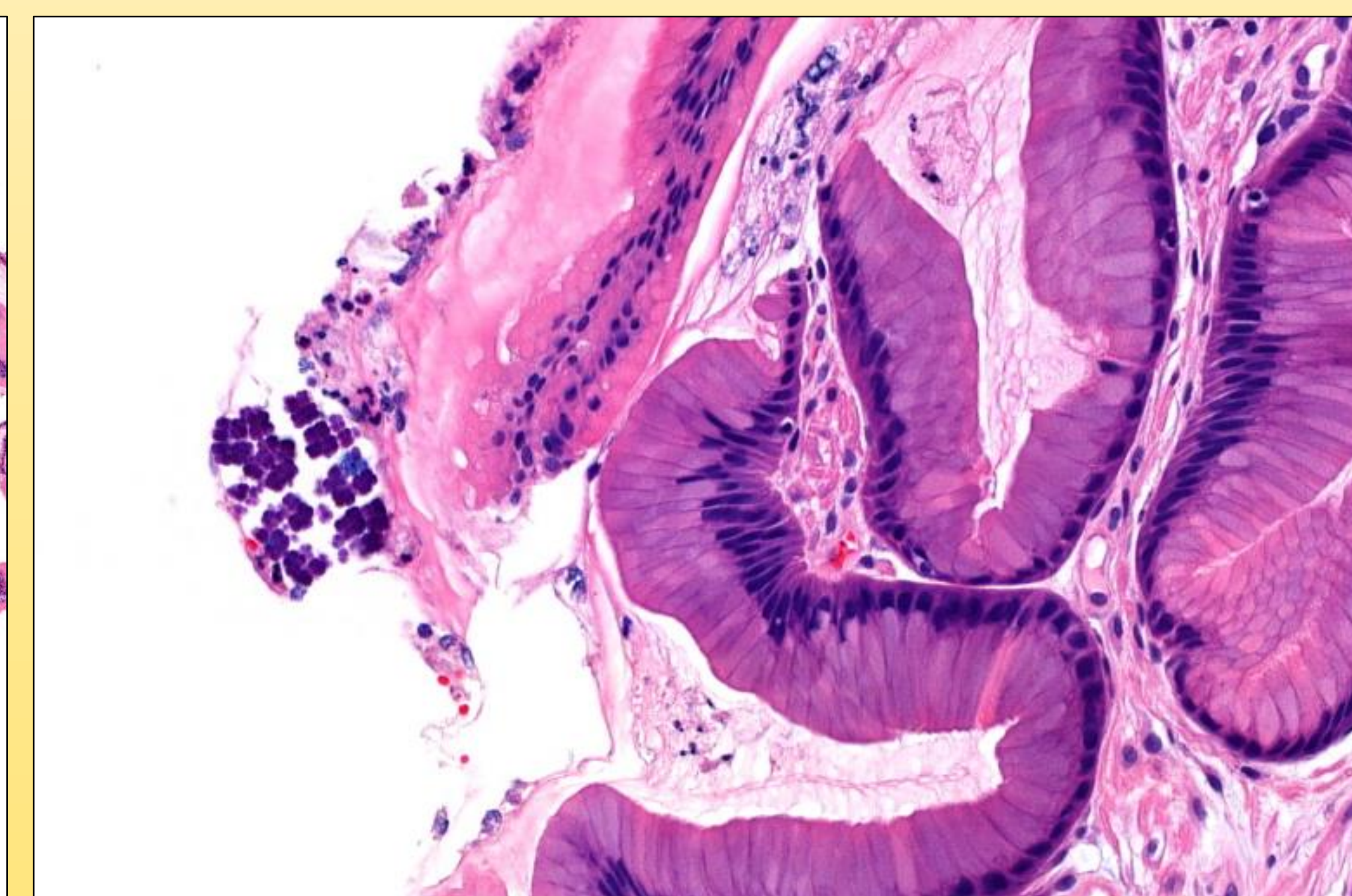


Figure 1D. High-power view (300x) of the green frame area in **1C** demonstrating *S. ventriculi* organisms with characteristic thick cell walls and arrangement in tetrads.

Case Outcome

- *S. ventriculi* infection was treated with ciprofloxacin and metronidazole for 7 days, along with a PPI twice daily.
- Repeat EGD two weeks later showed near complete resolution of mass lesion.
- Patient continued to have poor gastric emptying in absence of obstruction.

Teaching Points

- *S. ventriculi* infection is a rare, but reversible, cause of gastric outlet obstruction.
- *S. ventriculi* can be eradicated with antibiotics, but it may not resolve delayed gastric emptying. It is unclear if infection is the result of poor gastric emptying or the cause of it.
- Treatment of *S. ventriculi* infection is recommended as it is associated with gastric ulcers, emphysematous gastritis, and gastric perforation.

References

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