

## Introduction

**Diverticula** are bulging sacs that can occur in any part of the gastrointestinal tract

**9–23%** of small bowel diverticula are found incidentally via endoscopy

Small intestinal bacterial overgrowth (SIBO) is characterized by an abnormally increased bacterial burden in the small intestine with symptoms including:

- Abdominal distension and pain
- Bloating
- Diarrhea

Small intestinal diverticulosis is a known **risk factor** for SIBO

Small bowel aspirates and culture is considered gold standard for diagnosing SIBO, while **aspirates from diverticula** is not routine practice for diagnosis

We present a case of SIBO diagnosed by aspirates from a large duodenal diverticulum (DD)

## Case Report

**HPI:** 62-year-old female with chronic diarrhea, hepatic steatosis without cirrhosis, GERD, and diverticulosis presented for continued complaints of diarrhea and bloating. The patient noted 4-5 bowel movements per day

**Objective:** Vital signs, physical exam, and previous workup including stool culture, *Clostridium difficile* study, colonoscopy with biopsies, fecal calprotectin and elastase, abdominal imaging, and celiac serologies were unremarkable. Patient tried pancrelipase with no noticeable difference in diarrhea

EGD showed multiple fundic gland polyps in the stomach and **a large 40 mm diverticula** in the 3<sup>rd</sup> portion of the duodenum. Duodenal and gastric biopsies obtained ruled out celiac disease, pathogens, and *Helicobacter pylori*

Aspiration of duodenal diverticular fluid was significant for **>100,000 colony forming units per mL (CFU/mL)** *Escherichia coli*, *Enterococcus faecium*, and *Streptococcus mitis*

Disaccharidases (lactase, sucrase, maltase, palatinase, glucoamylase) were within normal limits

**Treatment:** Patient was initiated on rifaximin 550mg TID for 14 days with improvement of her chronic symptoms

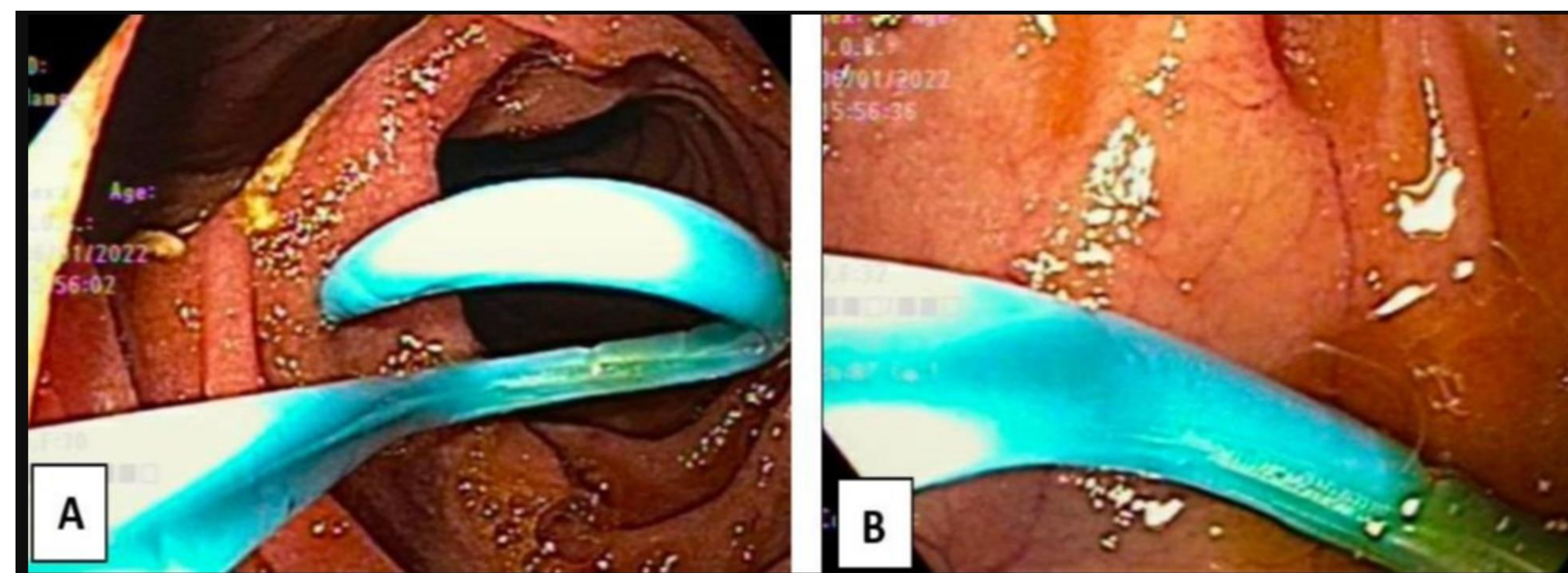


Image 1: [A] EGD findings with a large duodenal diverticulum in the upper left corner; [B] Process of aspirating duodenal diverticulum fluid.

## Discussion

While most DD are asymptomatic, small, and require no treatment, intervention is necessary if the patient develops SIBO, bowel obstruction, diverticulitis, bleeding, or perforation

SIBO can be diagnosed via small bowel aspirates showing >1000 CFU/mL

**Large DD can lead to SIBO** by creating a protected environment for bacterial species

Treatment of diarrhea due to SIBO and large DDs are treated with **antibiotic therapy**, like our patient who was prescribed rifaximin and noted improvement of symptoms

*It is important to understand that while DD are uncommon, large diverticulum can lead to chronic diarrhea and SIBO*