

Case Study

Symptomatic Uncomplicated and Extensive Colonic Diverticular Disease: A Report of Two Cases and Literature Review

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A B S T R A C T

Introduction: Diverticular Disease (DD) consists of diverticulosis and diverticulitis. In Diverticulosis of colon diverticulum/diverticuli (Pouches) develop in it. Symptomatic Uncomplicated Diverticular Disease (SUDD) is a syndrome, characterized by local abdominal pain with bowel movement changes but without systemic inflammation. If an acute diverticulitis does not resolve completely, Chronic Diverticulitis can develop. It is associated with localized or distant abscess/phlegmon. DD is an underrecognized disease especially in India, requiring early diagnosis, management and prevention as it impairs Quality of Life of patient.

Case Presentation: We report two cases of DD, an elderly diabetic and hypertensive male with non-mucoid loose stools 4-5 times per day for 10 days and second elderly diabetic male with diffuse abdominal pain, and discomfort, localized to the right lower quadrant. The first was diagnosed with CT as a case of multiple diverticuli in Sigmoid colon and focal Diverticulitis of descending colon.

Second case - Imaging revealed ileo-caecal and appendiceal thickening with peritoneal nodularity, raising suspicion for malignancy. Colonoscopy demonstrated pan-colonic diverticulosis and a caecal mass-like lesion. Histopathology, and PET-CT were negative for malignancy. A diagnosis of Extensive Colonic Diverticular Disease with Appendicular phlegmon was made. Both cases responded to conservative treatment with antibiotics and anti-inflammatory medicines.

Conclusion: Loose stools should be investigated properly as they could be the very first indication of DD in elderly. On the other-hand extensive colonic DD can mimic malignancy on imaging, when involving ileo-caecal region and appendix. A multidisciplinary, stepwise approach integrating imaging, colonoscopy, and histopathology is critical to accurate diagnosis and optimal patient outcomes.

Keywords: Diverticular Disease, Symptomatic Uncomplicated Diverticular Disease (SUDD), Extensive Colonic Diverticular Disease, Appendicular phlegmon, Quality of Life

Introduction

In diverticulosis, small pouches/diverticula develop and bulge out through weak spots in the walls of the colon.¹ Colonic diverticulosis is an age-related condition with increasing prevalence worldwide, affecting up to 60–70% of individuals over the age of 70 years.¹ In Western populations, diverticula predominantly involve the sigmoid colon; however, right-sided and pan-colonic diverticulosis are increasingly recognized.² In India, the true incidence of colonic diverticulosis is unclear due to limited community studies. Hospital-based data shows prevalence rates of 3.2% in northern India and up to 9.9% in southern India, increasing with age, from 0.3% under 30 years to about 32% over 60 years.³

The constipation and diarrhoea are independent risk factors for acute diverticulitis.⁴ Diverticulosis of the colon is often an incidental finding.⁵ noted on radiological or endoscopic investigation for IBS-like symptoms.⁶ Diverticular Disease (DD) consists of diverticulosis and diverticulitis, both of which were present in our patients. DD is when colon develops diverticulum/ diverticuli ..., while chronic diverticulitis is characterized by frequent abdominal pain and chronic obstructive symptoms.⁷

Symptomatic Uncomplicated Diverticular Disease (SUDD) is a syndrome within the DD spectrum, characterized by local abdominal pain with bowel movement changes but without systemic inflammation.

If an acute diverticulitis does not resolve completely, Chronic Diverticulitis can develop.⁸ It is associated with localized or generalized perforation, localized or distant abscess/phlegmon, fistula, stricture, or obstruction. DD is mainly considered a chronic condition that impairs quality of life (QoL).¹⁰

This case report highlights DD as a severe, underrecognized disease especially in India, requiring early diagnosis, management and prevention.

Case Report

Case I

A 69 years old male was admitted to the Department of Medicine of a Super-speciality hospital on 25.12.2021 in Delhi, with complaint of, non-bloody loose stools 4-5 times daily for 10 days. Stools were yellowish, non-mucoid. No vomiting, no fever but h/o recurrent belching was present.

There was a past history of recurring burning sensation in epigastrium and right hypochondrium for 2 years. He was a known case of type 2 Diabetes mellitus for 9 years, managed with Istamet (Sitagliptine 50 mgs/Metformin 500 mgs once daily in the morning), and Metformin (500 mg in the evening daily). He was also a known hypertensive for 32 years. Blood pressure was under control with Amlodipine 2.5 mg daily and Losar 50 mg daily. Before admission, he

had received Tab. Doxcef 200mgs bd, Tab. Pantocid 40mgs bd, Cap. VSL-3 bd and Tab. Nizonide (Nitazoxanide) 500mgs bd x 3days without improvement.

On examination he was afebrile. There was no tenderness of abdomen, liver was 2.5 cms below right costal margin, spleen, kidneys and no abdominal mass was palpable. Other systemic examination was unremarkable.

Laboratory evaluation revealed liver function tests; Direct Bilirubin 0.07 mg/dl; Total Bilirubin 0.28; SGPT 26; SGOT 31; ALP 73; Total Protein 6.94; Albumin 3.5; Renal Profile – BUN 6.5; Creatinine 1.12; Uric Acid 5.2; Sodium 132; Potassium 3.98; Calcium 8.54; Phosphorus 3.33; Complete Blood Count – WBC 7.48; NE-55.6%; LY-30.4; MO-11.7; EO-1.9, BA-0.4; RBC 4.39; Platelets 2.46. ESR (Westergens) 60; Hemoglobin-14.4 g/dl; MCV-99.7; MCH-32.8; MCHC-32.9 RDW -12.8; HbA1c 7.2%. Stool report- Hanging drop preparation (Microscopy) – Bacteria Showing Vibrio Cholera Like Motility – Not Seen. Stool Routine (Microscopy) – Color-Brown, Consistency-watery; Blood-NIL; Mucus-NIL; WBC-6-8/HPF; RBC- NIL; Macrophages- NIL; Ova-Nil; Pathogenic cysts – Nil; Trophozoites- Nil

Contrast-enhanced CT (CECT) of the abdomen demonstrated multiple Diverticuli ranging from 6-9 mm in Sigmoid colon with prominent surrounding vascularity. Focal fat stranding was seen in relation to descending colon adjacent to a diverticulum suggestive of focal Diverticulitis. Rest of the findings were normal.

A diagnosis of Acute Diarrhoea with descending colon focal Diverticulitis was made. Gastroenterology consult was taken and advice followed. He was treated with Inj. Monocef (Ceftriaxone) 1 gm bd, Inj. Metrogyl (antibiotic and antiprotozoal medication) 500 mg tds, Inj Pantop (Pantoprazole) 40 mgs in the morning, Inj. Emset (Ondansetron) 4 mg od, Tab. VSL3 [Live Freeze Dried Bacteria] 1 od, Cap. Redotril (Racecadotril 100mg anti-secretory) 1 od. Besides these he continued his anti-diabetic and anti-hypertensive medicines. Patient gradually improved and was discharged on the fifth day with advice to have follow-up with the gastroenterologist.

Long-term Follow-up

Ever since his admission patient hasn't been all that well. In 2022 he had 2 episodes of Severe Gastroenteritis with 5- 6 loose motions and 3-4 large vomits each time. With Tab. Metrogy 400mg tds, Tab. Emset 4mg stat and ORS, patient improved in one day.

In 2023 patient had one such episode of Severe Gastroenteritis which was limited to one day. Endoscopy done in June 2023 revealed ESO- Lax Les (loose lower esophageal sphincter). No Oesophagitis/Varix/Ulcer/ Growth. Stomach – Body and Fundus normal, Antral Hyperemia present. Duodenal bulb and D2 normal. Rapid Urease Test was positive for H. Pylori. He was given HP Kit for

14 days. In September 2023 gastroenterologist prescribed Nexpro (Esomeprazole) 40 mg before breakfast (BBF) and Lesuride (Levosulpiride) 25 mg HS for a month. In December again he was advised Tab. Pantocid (Pantoprazole) 40 mg BBF x 15 days followed by Aciloc (Antacid) 150mg bd x 15 days. He was then shown to a private physician and was prescribed (Nexpro) 40 mg BBF. He remained better with this medication for nearly one year.

In 2025 the patient experienced severe constipation for 2-3 days. He tried different laxatives – Castor oil or Tab. Biscodyl or Glycerine Suppository time to time. Gradually the response to either of these laxatives became poor. Once constipation was 3 to 4 days along with no passage of gas, the episode of loose motions (4-6) and Vomits (4-5) would start till everything inside the gastrointestinal tract was thrown out.

This one-day sickness episodes took place for three consecutive months at a stretch, starting in April 2025. In September his gastroenterologist was consulted for constipation who enquired whether there had been any bleeding per rectum or was there any mass in the abdomen (the complications of diverticulosis). The gastroenterologist opined against performing Colonoscopy. He explained that there was a risk of rupture of Sigmoid diverticulum as during the procedure colonoscope might enter the mouth of diverticulum, instead of lumen of healthy colon. Literature describes the risk of perforation at the time of Colonoscopy only during recovery phase of acute diverticulitis. The patient was started on Liquid Cremaffin 3 tsf HS [Liquid Paraffin (11.25ml) + Milk Of Magnesia (3.75ml)] and Pruease (Levosulpiride) 2mg 1 HS by his gastroenterologist and with this he was able to pass stools daily.

Now the patient is 74 years old and continues to take Cremaffin 5-10 ml at night daily. He needs to be around a toilet 2-3 hours in forenoons as he is not sure when the bowels would move, therefore he is scared to go out for longer periods of time. He is also a little depressed and his Quality of Life (QoL) has been affected.

Case 2

A 72-year-old male, presented to a gastroenterologist on 30 July 2025 with diffuse abdominal pain, bloating, and discomfort, predominantly localized to the right lower quadrant.

The patient reported a history of more than five years of postprandial urgency, during which he frequently needed to rush to the toilet, with a persistent sensation of incomplete evacuation. These symptoms were intermittently associated with constipation. He was a known diabetic controlled with medicines.

An abdominal ultrasound revealed an ill-defined hypoechoic fluid-filled area in the right iliac fossa. Thickening of the ileo-caecal walls with surrounding echogenic fat. A tubular

fluid-filled structure measuring 7.7 mm, suggestive of an inflamed appendix. Poor visualization of the distal appendix. Adjacent echogenic foci, suggestive of inflammatory debris. Impression: Right iliac fossa inflammatory mass - Appendicular phlegmon

A CECT abdomen conducted next day demonstrated - Eccentric soft-tissue thickening at the base of the caecum (up to 18 mm). Circumferential thickening of the terminal ileum over 3.5 cm. Thickening of the ileo-caecal junction. Loss of mural stratification with desmoplastic reaction. Extension of inflammation to the base of the appendix. Dilated appendix (22 mm) with a focal wall rent. Surrounding fat stranding and desmoplasia. Multiple enhancing peritoneal and mesenteric nodules (up to 10 mm). Peritoneal thickening in the right iliac fossa. These findings were suspicious for a malignant or mitotic process, prompting colonoscopy.

The colonoscopy revealed: Extensive small and large-mouth diverticula throughout the colon. Normal intervening mucosa. A deformed caecum with a polypoidal, mass-like lesion.



Figure 1. An Appendicular Phlegmon with a rent

Multiple biopsies were obtained. Histopathology showed no dysplasia or malignancy, prompting conservative management with close follow-up.

Additional Diagnostic Workup

Carcinoembryonic Antigen (CEA) levels were within normal limits

Positron Emission Tomography (PET) CT demonstrated mild tracer uptake in peritoneal nodular thickening with mesenteric stranding and sub-centimetric lymph nodes, favoring an inflammatory etiology rather than malignancy.

The patient was treated with anti-inflammatory therapy for 8 weeks – The regimen, started on 18 August 2025, included Esomeprazole (Nexpro) 40 mg once daily, Mebeverine (Colospa – anti-spasmodic) 135 mg three times daily, Velgut (a combination of Probiotic & Prebiotic) 1 tablet

once daily, and Mesalamine (Vegaz - an aminosalicylate – anti-inflammatory) 1.2 g once daily.

During this period, he developed cerebral venous sinus thrombosis (CVST) a second time. Although CVST can rarely be associated with malignancy, repeat invasive evaluation was deferred by the patient until completion of therapy.

Follow-Up

Repeat colonoscopy after 8 weeks showed: Persistent extensive diverticulosis. Normal intervening mucosa. Complete resolution of the previously noted caecal lesion, which was retrospectively considered an edematous inflammatory fold.

The patient remains under regular gastroenterology care and has been transitioned to a high-roughage diet as advised. He continues on maintenance medical therapy including esomeprazole/domperidone (Nexpro RD) 40 mg once daily, Sulfasalazine (Saaz) twice daily after meals, and Cremalax (Sodium Picosulfate) 10mg two tablets at bedtime to facilitate bowel movements. Osmotic laxatives (Laxopeg - Polyethylene Glycol 3350 sachet) are now used only if required and have largely been discontinued, with the patient instead using a stool softener Softovac (Ayurvedic medicine with Isabgol, Saunf etc.) for bowel regulation. Librax (Chlordiazepoxide 5mg) 1 HS SOS has been prescribed for peaceful sleep.

Clinically, the patient reports 2–3 bowel movements per day, improved stool consistency, and moderate activity levels compared to his earlier lifestyle. He remains cautious with dietary choices and is on scheduled follow-up every 6-8 weeks to monitor symptoms and ensure ongoing clinical stability. The QoL has been impaired.

Discussion

Among gastrointestinal diagnoses, diverticulitis is the sixth most common cause of hospital admissions and 11th most common cause of non-malignant deaths in the United States.¹¹ The standardized incidence rate of hospitalization for acute diverticulitis was found – by a sample consisting of 20% of the U.S. population – rising from 59 per 100,000 per year to 71 per 100,000 per year from 1998 to 2005.¹²

The term ‘divertikel’ was used by Feischman in 1815 and Klebs in 1869 realized that diverticula were acquired by constipation.¹³ To understand where we are currently, it is worth understanding how treatment of diverticular disease has evolved. DD was rarely described in the literature prior to the 1900’s. In the late 1960’s and early 1970’s, Painter and Burkitt popularized the theory that diverticulosis is a disease of Western civilization based on the observation that diverticulosis was rare in rural Africa but common in economically developed countries.¹⁴

The DD can be classified on a continuum from diverticulosis to diverticulitis.¹⁵ Asymptomatic diverticulosis, diverticular

bleeding, Symptomatic Uncomplicated Diverticular Disease (SUDD), Segmental Colitis Associated with Diverticulosis (SCAD) and Diverticulitis with or without serious complications such as abscess, perforation - peritonitis, intestinal blockage or fistula. Here, we have presented a case report of two DD patients, with one having Symptomatic Uncomplicated DD and other of Extensive Colonic DD with Appendicular Phlegmon.

According to E. Eypasch, J. I. Williams, S. Wood-Dauphinee et al. DD patient’s Gastrointestinal QoL is affected with any of these symptoms; abdominal pain, bloating, strong burping or belching gurgling noises from the abdomen, fluid or food coming up into the mouth, nausea/vomiting, frequent bowel movements, urgent bowel movements, diarrhoea, constipation and fever.¹⁶ The clinical features in our first case were non-bloody, yellowish, non-mucoid loose stools 4-5 times per day and recurrent belching. The second case presented with diffuse abdominal pain, bloating, and discomfort, predominantly localized to the right lower quadrant. The abdominal pain is an alarming sign in DD as are change in stool caliber, iron-deficiency anemia, blood in stool, and weight loss.¹⁷

The diagnosis of DD requires imaging tests ie ultrasonography (USG) and / or computed tomography (CT) and/or magnetic resonance imaging (MRI) and a colonoscopy besides blood tests and stool test. The choice of test used may depend on both clinical and non-clinical factors, including: presenting complaints, co-morbidity, routine or urgent indication.... DD will often, be diagnosed following the investigation of patient symptoms such as a change in bowel habit or rectal bleeding. In such instances, colonoscopy or flexible sigmoidoscopy is already established as the most sensitive test to exclude other important clinical conditions including colitis or colorectal cancer (CRC). However, in patients who are frail and/or acutely unwell, especially if there is significant medical co-morbidity, non-invasive investigations such as CT may be preferred.¹⁸

In our cases too CT was done which established the diagnosis in first case as it demonstrated multiple diverticula in Sigmoid colon, as is mentioned by Murphy T, Hunt RH, Fried M, et al. that the sigmoid colon is involved in 95% of cases.¹⁹ and there was focal fat stranding also present in relation to descending colon adjacent to a diverticulum suggestive of focal Diverticulitis.

In the second case - Imaging revealed ileo-caecal and appendiceal thickening with peritoneal nodularity, raising suspicion for malignancy. Colonoscopy demonstrated extensive pan-colonic diverticulosis and a caecal mass-like lesion. Histopathology, tumor markers, and PET-CT findings were negative for malignancy. Conservative anti-inflammatory therapy led to complete resolution of the lesion on follow-up colonoscopy after 8 weeks. For patients with diverticular abscesses, colonoscopy within

4 weeks may be appropriate due to the increased risk of an underlying neoplasia.²⁰ In all other cases, colonoscopy is optimally performed 6–8 weeks after the acute episode, allowing time for inflammation to resolve and minimizing procedure-related risks.²¹

Both of our cases were managed conservatively with I/V fluids, I/V antibiotics and I/V Antacids. Antibiotics and anti-inflammatory medicines remain as mainstay of treatment for DD.

Conclusion

These cases underscore the diagnostic challenge of differentiating between Symptomatic Uncomplicated Diverticular Disease (SUDD), and Diverticulitis due to overlapping clinical and imaging features. Our patients presented with loose motions and abdominal pain. The abdominal findings on CT scan and colonoscopy (in second case) ultimately diagnosed them with SUDD and Extensive Colonic DD with Appendicular Phlegmon in first and second case consecutively. Both cases were treated conservatively with I/V antibiotics and anti-inflammatory medicines, improved and were discharged in healthy condition.

Both cases and their family members have a better understanding of DD and also about the disease progression. The long-term follow-up of cases has shown that their life style and QoL has changed and social outings limited.

Physicians should be aware that due to age-related physiological changes, and multi-morbidity, older adults with DD often present with atypical symptoms, variable laboratory findings, and are at higher risk for complications than younger patients. More aggressive approach should be taken to diagnose DD in this population. Loose stools should be investigated properly as they could be the very first indication of DD in elderly. On the other-hand extensive colonic DD can closely mimic malignant pathology on imaging, particularly when involving the ileo-caecal region and appendix. Physicians must therefore exercise caution in making a proper definitive diagnosis in cases where an inflammatory mass may mimic malignancy. This diagnostic overlap may result in unnecessary surgical or oncologic interventions if not carefully evaluated. A multidisciplinary, stepwise approach integrating imaging, colonoscopy, histopathology, and follow-up is critical to accurate diagnosis and optimal patient outcomes.

Conflict of Interest: None

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