

Colonic diverticulosis complicated by haemorrhage and diverticulitis

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Abstract

Background: Diverticular disease is common in Western countries following the advent of industrialized methods of food processing in the 20th century. Although uncommon in the developing countries prompt diagnosis of the condition should be made in order not to miss a potentially lethal but treatable condition.

Methods: We reviewed the case records of a 78 year old man who presented with constipation, abdominal pain and abdominal distension of three months duration.

Results: Barium enema confirmed diverticulitis. He recovered

on conservative treatment but re-presented 3 months later with massive lower gastrointestinal bleeding which was also managed conservatively and was then discharged for follow up.

Conclusion: Prompt diagnosis of diverticular disease is necessary in order not to miss a potentially lethal but treatable condition.

Key words: Diverticulitis, Bleeding, Barium enema

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Introduction

Diverticular disease is ubiquitous in Western civilization affecting approximately 30% over the age of 60 years and 60% over the age of 80 years¹. The disease was virtually unknown prior to 1900 and its subsequent incidence and geographic distribution suggest a direct relationship to industrialized methods of food processing². Diverticulosis describes the presence of pulsion diverticula (small sac-like outpouchings) through vascular entry sites into pericolic fat, often between the mesenteric and antemesenteric taeniae³, diverticulitis implies superimposed inflammation whereas the term diverticular disease encompasses both concepts.

In Asia and Africa diverticulosis occurs in less than 0.2% of the population probably due to a high fibre diet unlike the refined diet of Western nations¹. Both sexes are affected in equal proportion⁴. Although the most common site of diverticula is the sigmoid colon, both the small and large bowel can be affected. Diverticula could either be congenital or acquired with right-sided bowel disease more prevalent in Asians and in patients younger than 60 years⁴.

Barium enema is the most important singular radiological investigation required to determine the

extent and severity of colonic diverticular disease^{2,5}. This case is of interest because, although an uncommon disease in Nigerians, prompt diagnosis of diverticular disease should be made in order not to miss a potentially lethal but treatable condition.

Case Report

J.P is a 78-year old man, a retired civil servant who presented at the emergency department of Lagos University Teaching Hospital, Lagos, Nigeria with constipation, abdominal pain and abdominal distension of three months duration. Pain was said to be generalized and colicky in nature, relieved by passing flatus or having a bowel movement and increased after a meal. Also noted was diarrhoea alternating with constipation, constipation occurring more frequently. There was also history of bloating. On examination of the abdomen, there was generalized tenderness and no mass was palpable. There was neither guarding nor rigidity and succussion splash was negative.

Abdominopelvic ultrasound scan done was normal. Plain abdominal radiograph showed faecal impaction indicative of constipation. Barium enema (figure 1) done two weeks after presentation revealed free flow of barium to the caecum with numerous outpouchings in the descending colon with luminal narrowing and irregularity. Diagnosis of multiple diverticulitis complicating diverticulosis was made. The patient was managed conservatively and discharged to the outpatient clinic. Three months later, the patient was readmitted following massive lower gastrointestinal bleeding. Patient was managed conservatively with intravenous dicynone and two pints of whole blood were transfused. Patient was discharged home to be managed on outpatient basis.

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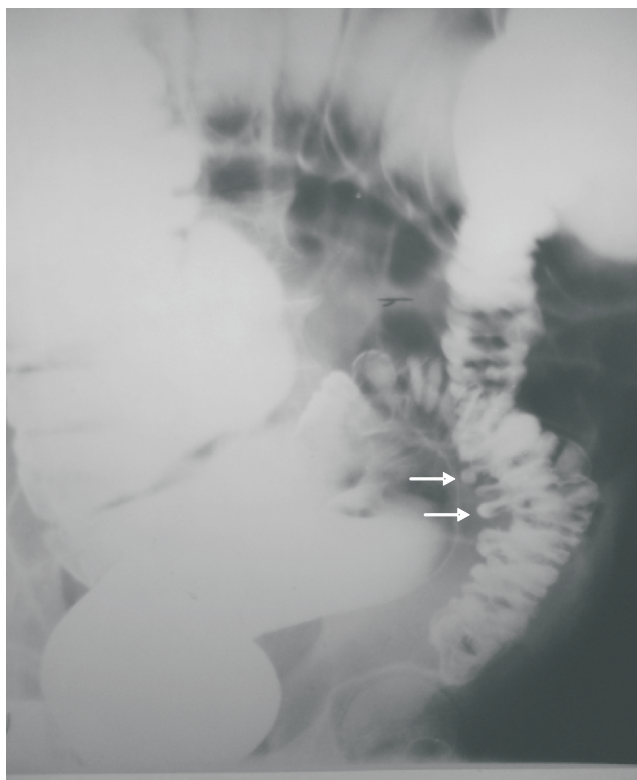


Figure 1: Barium enema showing multiple outpouchings in the descending colon (arrows).

Discussion

Most patients with diverticular disease are asymptomatic but many complain of vague left-sided abdominal pain and altered bowel habit symptoms very similar to those of irritable bowel syndrome². Approximately 10-25% of individuals with diverticulosis will experience bouts of diverticulitis that are evidenced by worsening left iliac fossa pain, constipation and vague abdominal pain.

The development of diverticular disease involves at least two mechanisms: raised intraluminal pressure and weakness of the colonic wall. Patients with sigmoid diverticulosis have increased intraluminal pressure probably resulting from excessive segmentation (segmental contraction)⁵. Raised intraluminal pressure leads to formation of mucosal outpouchings through weak points in the colon. The weak point corresponds to areas where the vasa recta penetrate the circular layer of the bowel wall³.

Ultrasonography (US) plays a vital role in the early diagnosis of acute colonic diverticulitis due to the fact that clinical diagnosis at times could be difficult. US is also very valuable in monitoring assessment of severity and in surgical decisions. The diagnostic sensitivity of US has been put at 95% in the hands of experts⁶. The use of US in abdominal pain facilitate an accurate diagnosis of acute colonic diverticulitis⁶. According to Alberti et al

ultrasonography has a sensitivity of 66% in the assessment of wall thickness and in detecting the presence of diverticula while that of detection of abscess complications, pericolic collection and fistula tracts is 100%⁷.

Although invasive, barium enema remains the gold standard among the radiological investigations in colonic diverticular disease⁸. It is the confirmatory test in the radiological management. It is recommended that acute inflammation be allowed to subside before barium studies to avoid danger of perforation and peritonitis as was done in this patient. In early stages, saw tooth appearance of the pre-diverticular stage is seen⁸.

Magnetic resonance imaging and computerized tomography do not contribute to the diagnosis unless there are complications including diverticulitis which occurs in 10-20% of persons with diverticulosis, colonic tears leading to haemorrhage or perforations; peritonitis, sepsis, abscess formation and fistula formation most commonly to the bladder or bowel⁴. Differential diagnosis include colorectal cancer, complicated ulcer disease, acute appendicitis, cystitis, ectopic pregnancy, ischaemic colitis and mesenteric infarction⁴.

The best management is medical. Outpatient management with close observation is appropriate for majority of patients,⁹ as is being done for this patient. CT guided drainage of diverticular abscess has also been recommended to expedite medical and surgical treatment⁹. Colonoscopy is advised for all patients with symptomatic diverticular disease to exclude underlying neoplastic disease. Several studies suggest that fibre supplementation benefits patients with symptomatic diverticular disease. However, there is no evidence to support the use of antispasmodic agents, despite cramping often associated with symptomatic diverticular disease¹⁰.

Conclusion

Diverticular disease and its complications such as haemorrhage and diverticulitis, although rare in the developing countries are now being seen and documented more frequently. Barium enema, after inflammation has subsided is still the most useful investigation in determining the extent and severity of colonic diverticular disease. Non-operative management is usually adequate in the majority of patients.

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