

Complications of sigmoid diverticulitis - A case series

¹Krishnakanth AVB, Junior Resident, Dept of General Surgery, Sri Ramachandra Institute of Higher Education and Research, Porur, Chennai.

²Arulappan T, Professor, Dept of General Surgery, Sri Ramachandra Institute of Higher Education and Research, Porur, Chennai.

³Rishikesh V, Junior Resident, Dept of General Surgery, Sri Ramachandra Institute of Higher Education and Research, Porur, Chennai.

Corresponding Author: Krishnakanth AVB, Junior Resident, Dept of General Surgery, Sri Ramachandra Institute of Higher Education and Research, Porur, Chennai.

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Abstract

Background: Acute colonic diverticulitis is a painful condition of the colon characterised by inflammation of the colonic diverticulum. Majority of these cases involve diverticulum of the sigmoid colon. The recurrence of episodes of diverticulitis in such cases lead to wide spectrum of complication ranging from chronic abdominal pain to perforation and peritonitis which have to be treated according to the presentation of the patient. The case series will deal about the various complications encountered in a group of patients with sigmoid diverticulitis. The objective of our study is to analyse the various complications associated with sigmoid diverticulitis and their management.

Methods: A case series involving 6 patients diagnosed with sigmoid diverticulitis in our institute (Sri Ramachandra Institute of Higher Education and Research) to analyse their complications and treatment. First case is

a sigmoid diverticular abscess mimicking a urachal abscess. Second case is a colo-cutaneous fistula. Third case is a colo-vesical fistula. Fourth case is sigmoid diverticular perforation. Fifth case is sigmoid diverticulitis with sealed off perforation. Sixth case is sigmoid diverticulitis complicated by pericolic abscess formation. A case series involving 6 cases with various presentations of complication of sigmoid diverticulitis has been reported here.

Results and conclusion: Complications of sigmoid diverticulitis as stated by Hinchey classification along with various types of sigmoid fistulas are seen in this case series. Various complications can be expected in sigmoid diverticulitis especially in patients with previous history of disease. The management is based depending on type of complication and whether it takes an acute or chronic manifestation. Proper pre-operative evaluation and

appropriate surgical management will lead to cure without much complication.

Keywords: Complications of Sigmoid Diverticulitis, Colovesical fistula, Colocutaneous fistula, Diverticular abscess.

Introduction

Sigmoid diverticulitis is a condition characterized by inflammation of diverticulum of sigmoid colon which also happens to be the most common site for colonic diverticulum. About 15% of individuals develop diverticula by the fifth decade of life and this increases with time. A majority of patients develop recurrence of disease after its initial onset. Various complications can be observed in such patients with acute and chronic manifestations for which management differs in each condition. Small sized, well-contained perforations are common in the course of the disease and most cases can be managed conservatively with antibiotics and supportive medical treatment. However, unusual and more severe complications such as non-contained perforation, phlegmon and abscess, phylephlebitis, intestinal obstruction, bleeding, and fistula necessitate intensive management.[1] Recurrent episodes of diverticulitis leads to a spectrum of complications ranging from chronic abdominal pain to perforation, peritonitis or fistula formation which have to be treated according to the presentation of the patient. One of the most difficult to correct is a persistent fistula, particularly an internal fistula of which the commonest is a colovesical fistula, and pneumaturia may be the first manifestation of the underlying disease.[2]

Aim

To present rare complications associated with sigmoid diverticulitis which warranted surgical management.

Materials and Methods

A case series involving 6 patients diagnosed with sigmoid diverticulitis in our institute (Sri Ramachandra Institute of Higher Education and Research – year 2019) to analyse their complication and treatment.

Case 1

A 36 year old gentleman presented with complaints of swelling in the umbilical region for one month. An intra-abdominal tender mass was felt below the umbilicus size – 2x4cm, firm in consistency and not mobile. CECT whole abdomen showed features suggestive of infected urachal cyst at level of dome of bladder with adjacent infective changes, features of sigmoid diverticulitis with associated wall thickening and narrowing of sigmoid colon likely benign stricture. Patient underwent cystoscopy followed by sigmoidectomy with colorectal anastomosis, excision of infected urachal cyst. This was a rare case of sigmoid diverticular abscess masquerading as infected urachal cyst.



Fig.1: Resected sigmoid segment along with diverticulum extending near bladder.

Case 2

A 60 year old female presented with complaints of discharge from lower abdomen over previous scar site for duration of 2 months, foul smelling. MRI abdomen showed sigmoid diverticulosis with features of diverticulitis and colocutaneous fistulous tract extending from sigmoid colon upto infraumbilical region. Patient underwent sigmoidectomy with colorectal anastomosis and diversion ileostomy. Loop Ileostomy was reversed after 2 months. This is a case of colocutaneous fistula formation due to recurrent episodes of sigmoid diverticulitis. A persistent discharging fistula was the indication of elective surgical intervention. To prevent recurrence, the resection of entire sigmoid is necessary along with excision of fistula tract.

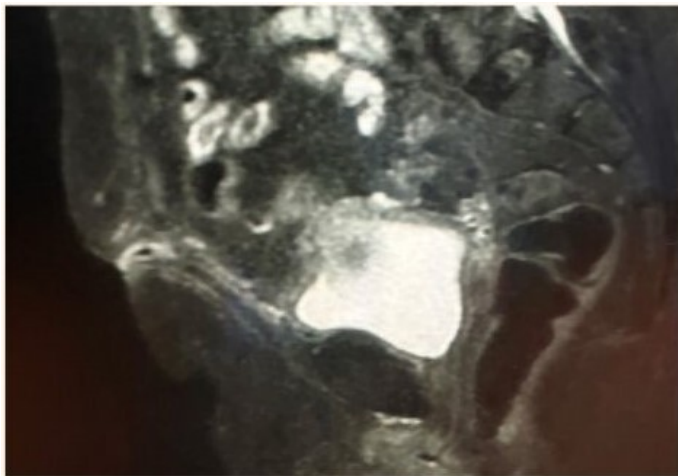


Fig. 2: CECT abdomen showing the fistulous tract from sigmoid to umbilicus. (Colocutaneous fistula)

Case 3

A 60 year old male patient presented with pneumaturia and clinical features of recurrent UTI for duration of one month. History of passing sediments in urine. CT KUB and urogram revealed multiple sigmoid diverticulosis with acute sigmoid diverticulitis and short segment wall thickening in the sigmoid colon extending to anterosuperior aspect of bladder. Presence of fistulous opening in sigmoid was confirmed by colonoscopy.

Patient underwent sigmoidectomy with colorectal anastomosis along with cystoscopy and left DJ stenting.



Fig.3: Colonoscopy picture showing the opening of the colovesical fistula.

Case 4

A 57 year old gentleman presented with complaints of abdominal pain for 10 days. History of high grade fever for 5 days with nausea and loose stools 5 episodes for one day duration. On physical examination diffuse tenderness with guarding present over the abdomen more in left lumbar and iliac region and increased bowel sounds. CECT abdomen showed sigmoid diverticulitis with diverticular perforation. Patient underwent sigmoidectomy and colorectal anastomosis. Postoperative period was uneventful and patient recovered well.

Case 5

A 40 year old gentleman came complaints of abdominal pain for 7 days and fever on and off for 3 days. There was no history of vomiting/loose stools/ abdominal distension. Abdominal examination revealed tenderness in suprapubic and left iliac region with no guarding/rigidity. CECT abdomen showed sigmoid diverticulitis with posterior sealed off perforation and no intraabdominal or

retroperitoneal collection. Patient was treated conservatively, kept on nil per oral along with IV antibiotics and improved symptomatically.

Case 6

A 48 year old male patient presented with pain in left lower quadrant of abdomen for 2 weeks duration, aggravated by food intake and relieved on passing stools. No history of vomiting/ abdominal pain/ melena. Abdominal examination showed tenderness in lower abdomen with no guarding/rigidity. CECT abdomen revealed sigmoid diverticulitis with pericolic collection. It was a Hinchey classification type 1 complication (pericolic abscess). Patient was managed with IV antibiotics and taken up for sigmoidectomy with colorectal anastomosis after 6 weeks interval.

Results

The above cases depict scenario of sigmoid diverticulitis complicated by fistulisation, abscess formation and perforation. Management in such cases involved resection of sigmoid and colo-rectal anastomosis. Unique complications were identified in each case and disparity in management strategy noted which was adapted to the specific complication. It is noted that in all the cases, the patient had history of previous episodes of abdominal pain which were treated symptomatically and they were diagnosed not with the initial pathology (sigmoid diverticulitis) but at a later stage by its complications.

Discussion

Sigmoid diverticular abscess mimicking an infected urachal cyst is a rare manifestation. Coexisting pathologies must be taken into consideration. Since Hinchey's traditional classification for perforated diverticulitis in 1978, several modifications and new grading systems have been presented to display a more contemporary overview of the disease.[3] Modified Hinchey classification, which corresponds to a slightly

more complex classification by comparison with the original description which allows to categorize patients with ACD into four major categories (I, II, III, IV) and two additional subcategories (Ia and Ib).[4] Colocutaneous fistula occur very rarely, accounting for 1–4% of the total number of fistulae complicating colonic diverticular disease. In a case of colocutaneous fistula, a persistent discharging sinus is an indication of elective surgical intervention. To prevent recurrence the resection of entire sigmoid is necessary in addition to excision of fistula tract. Complications can be avoided if diagnosed and treated at an earlier stage. Fistulae complicating diverticulitis are the result of a localized perforation into adjacent viscera, and occur in 4–20% of patients hospitalized for diverticular disease. The most common presenting symptom is pneumaturia and dysuria, abdominal pain and, rarely, hematuria. CVF is more common in males and in females with a history of hysterectomy. The ideal treatment for symptomatic patients is segmental colon resection which is now being performed by laparoscopic approach also. In case of abscess formation with or without associated perforation, management differs based on the containment of perforation and general condition of patients. In patients with covered perforation, abscess size should guide the decision on whether to perform surgery later on or not. In the light of long-term quality of life, patients fare better after elective sigmoid colectomy when abscess size exceeds 1 cm.[5] Whilst most mesocolic abscesses can be managed with percutaneous drainage alone, pelvic abscesses are associated with a higher rate of future complications and usually require percutaneous drainage followed by interval sigmoid resection.[6] The onset of peritonitis is a definite indication for surgical intervention compared with locally sealed off perforation which can be treated with antibiotics and observed while planning for an elective sigmoidectomy at a later date.

Conclusion

The above case series shows that various complication can be expected in sigmoid diverticulitis especially in patients with previous history. Complication of sigmoid diverticulitis should be differential diagnosis to be considered when there is supporting history and clinical features. Complications of sigmoid diverticulitis, despite the rise in medical management, often result in surgical intervention for cure. The management is based depending on type of complication and whether it takes an acute or chronic manifestation. Proper pre-operative evaluation and appropriate surgical management will lead to cure without much complication.

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