



Perforated diverticulitis of the sigmoid colon revealed by a perianal fistula



Imed Ben Amor^a, Radwan Kassir^{b,*}, Elias Bachir^c, Katharina Hufschmidt^a, Tarek Debs^a, Jean Gugenheim^a

^a Department of General Surgery, Archet 2 Hospital, University Hospital of Nice, Nice, France

^b Department of General Surgery, CHU Hospital, Jean Monnet University, Avenue Albert Raimond 42270, Saint Etienne, France

^c Department of Digestive Surgery, Centre Hospitalier Régional Metz-Thionville, Thionville, France

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ABSTRACT

INTRODUCTION: Diverticular disease of the colon is a frequent pathology; however, perforated diverticulitis with a spontaneous sigmoidocutaneous fistula revealed by a perianal abscess is an uncommon presentation. We present this extremely rare case of a perforated sigmoid diverticulum in the perianal area, which is the first case that we have encountered in our practice and in the literature, along with the accompanying diagnostic and therapeutic issues and a review of the literature.

PRESENTATION OF CASE: We report the case of a 47-year-old man who was admitted to the emergency room due to a perianal abscess. The patient was taken to the operating room on an emergency basis. In the lithotomy position, the abscess was located at the 4 o'clock position. Incision and drainage was performed. Intraoperatively, the abscess was found to be deep, and considered an ischioirectal abscess. No fistulous tract was identified. An MRI of the pelvis was performed one month postoperatively which revealed a perforated diverticulitis of the sigmoid colon causing a perianal fistula. After the abscess was successfully treated, a sigmoidectomy was performed. Fifteen centimeters of the colon were resected. No postoperative complications occurred.

DISCUSSION: Perianal fistula is an obvious physical sign but its etiology is complex to determine. The pathophysiological mechanism involved is the emergence of a pressure gradient between the peritoneum and surrounding structures, causing rupture of the perianal tissue, allowing gas from a perforation to diffuse along tissue planes.

CONCLUSION: General surgeons should bear in mind this rare presentation of a sigmoid diverticulitis.

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1. Introduction

Diverticular disease of the sigmoid is frequent. Sigmoid diverticulosis is characterized by herniation of the mucosa and submucosa through the muscular layer of the sigmoid and the perforation of the sigmoid diverticulitis can be fatal. Perforated diverticulitis revealed through a perianal abscess is an uncommon presentation. Perianal abscess is an obvious physical sign but its etiology is complex to determine [1]. We present this extremely rare case of a perforated sigmoid diverticulum through a sigmoidocutaneous fistula to the perianal area, which is the first case we have encountered in our practice, along with the accompanying diagnostic and therapeutic issues and a review of the literature (Fig. 1).

2. Presentation of case

We report the case of a 47-year-old man who was admitted to the emergency room due to a perianal abscess. His medical history included an appendectomy. The patient smokes one pack of cigarettes a day. The patient was taken to the operating room for an incision and drainage to be performed. Intraoperatively, the exploration revealed a deep ischioirectal abscess at the 4 o'clock position. No fistulous tract was identified. No masses were palpable. The rectal mucosa was normal. A good sphincter tone was noted. Drainage of the cavity was performed and the postoperative period was uncomplicated (Fig. 2).

An MRI of the pelvis was done one month postoperatively that revealed a perforated diverticulum of the sigmoid colon with a fistulous tract leading to the ischioirectal abscess. A contrast enhanced abdominal CT scan showed multiple diverticular diseases in the sigmoid colon. A total colonoscopy examination was done. No lesion suggestive of inflammatory bowel disease was identified (Fig. 3).

* Corresponding author. Tel.: +33 06 13 59 19 71.

E-mail address: Radwankassir42@hotmail.fr (R. Kassir).

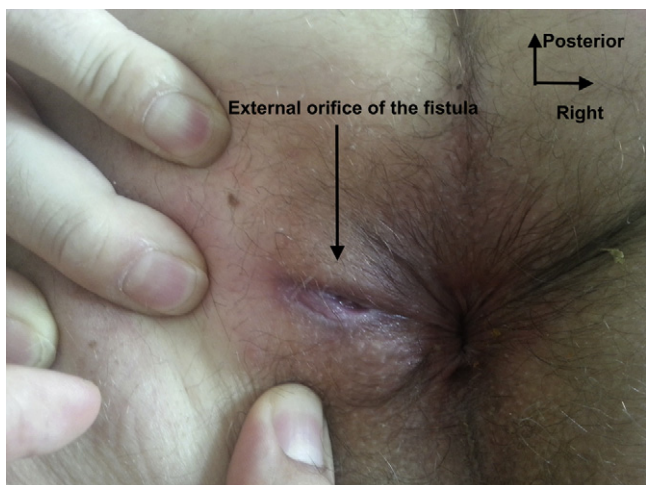


Fig. 1. Image of the patient's fistula with a perforated diverticulitis.

The patient admitted suffering from a previous episode of left lower quadrant abdominal pain treated with antibiotics and analgesics by his general practitioner without undergoing radiologic investigations.

The diagnosis was made of a perforated diverticulum of the sigmoid colon revealed by an ischioirectal abscess. After the abscess was successfully treated, a sigmoidectomy with a colorectal anastomosis was performed. Fifteen centimeters of the colon were resected. No complications occurred in the postoperative period. The patient was discharged on the 5th postoperative day. The histopathology report confirmed a sigmoid diverticulitis. Some diverticulae showed an ulcerated mucosa associated to a lumen filled with purulent secretions and necrotic debris. At the contact, presence of an inflammatory tissue rich in lymphocytes and macrophages was noted.

3. Discussion

Colonic diverticulosis is a common disease of the aging population of the Western world. The prevalence of diverticular disease ranges from 65% of those aged 85 years, 30% of those aged 60 years and in less than 5% in those aged 40 years [2]. Colonic diverticulosis is mostly symptomatic. The most common complication of colonic diverticulosis is acute diverticulitis. The disease is usually silent and must be suspected in patients presenting with crampy abdominal pain, altered bowel habits, anemia, chronic abdominal pain or discomfort [3].

Furthermore, the extension or rupture of a diverticular phlegmon or abscess into an adjacent organ may give rise to fistulae, most commonly colovesical ones. Other uncommon fistulae from diverticulitis have been identified, such as colouterine, colosalpingeal, coloseminal and ureterocolic. Colocutaneous fistulae occur very rarely, accounting for 1–4% of the total number of fistulas complicating colonic diverticular disease. Colocutaneous fistulae occur in about 1% of cases, and the majority of them arise almost exclusively as a complication of previous bowel resection for diverticulitis. The incidence of fistulization is higher in patients in whom an operation is performed in the presence of acute perforation or abscess. In such cases a colocutaneous fistula may coexist with a colovaginal or colovesical fistula. Recurrent attacks of diverticulitis create intra-abdominal adhesions predisposing to fistula formation. In addition, colocutaneous fistulae may be the result of percutaneous drainage of diverticular abscesses without subsequent resection. However, spontaneous sigmoidocutaneous fistulae revealed by an ischioirectal abscess, as was the current case, has not been described in the



Fig. 2. Abdominal Magnetic Resonance Imaging (T2W images) revealed a multiple diverticula of the sigmoid colon. Findings are suggestive of perforated diverticular causing perianal fistula (arrow).

literature. We have reported our experience in the management of a patient with a perforated diverticulum, whose main physical sign and presentation was an ischioirectal abscess.

Diagnosis is often delayed because clinical symptoms are not specific and the diagnosis is performed mainly by imaging studies. In our case, the patient had a history of left lower quadrant pain, that was not investigated, and it was probably an episode of acute sigmoid diverticulitis that later perforated directly to the peritoneal reflection into the retroperitoneum and developed a fistulous tract that was revealed by an ischioirectal abscess. A delayed diagnosis can be fatal, because perforation is associated with a high mortality. Clinically, a patient with a fistula should first be managed with an appropriate drainage and antibiotics to reduce the inflammation, and only then should an operation be performed [4,5]. In this case, after conservative therapy, a sigmoidectomy with fistulectomy was performed and provided good results without any complications.

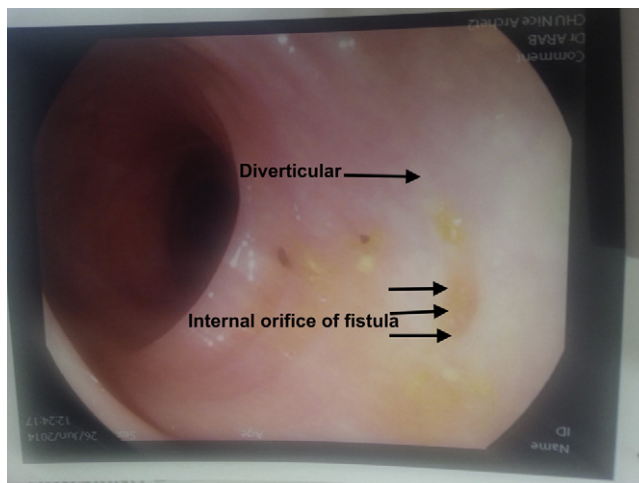


Fig. 3. Colonoscopic examination shows a perforated diverticular.

4. Conclusion

Although the incidence of perforated colonic diverticulum in the retroperitoneum is extremely low, surgeons should be aware of the existence of this kind of atypical presentation of colonic diverticulitis. MRI could be a valuable tool in the correct diagnosis and management of unusual presentations of an ischiorectal abscess, with a previous history of left lower quadrant pain.

Conflict of interest

None.

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Consent

“Informed consent was obtained from the patient in writing for the publication of this case report and the accompanying images. A copy of the written consent is available for review and can be obtained from the Editor-in-Chief of this journal on request”.

Author contribution

Imed Ben Amor and Radwan KASSIR: writing.

Tarek Debs, Elias Bachir, Hufschmidt Katharina : reviewed the paper.

Jean Gugenheim : reviewed and revised the paper.

Key learning points

- General surgeons should bear in mind this extremely rare presentation of perianal fistula.
- Perianal fistula is an obvious physical sign but its etiology is complex to determine.
- The risk of infection associated with the dissemination of perianal fistula is poorly documented and justifies a monitoring of this physical sign.
- The unusual presentation of the perianal fistula prompted us to do a MRI first.

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