A case of solitary rectal diverticulum presenting with a large retrorectal abscess

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1. Introduction

Despite the high incidence of colonic diverticular disease, the occurrence of rectal diverticula is extremely unusual, with only few, sporadic published reports since 1911 [1]. According to the current literature, rectal diverticulosis applies for 0.1% of the cases of colonic diverticulosis. The vast majority of patients with rectal diverticula are diagnosed incidentally; symptomatic rectal diverticula are very rare [1,2]. We report an isolated rectal diverticulum, which presented with a large retrorectal abscess. The SCARE Guidelines list was followed [12].

2. Case presentation

A 49-year-old Caucasian female was brought to the emergency department complaining of abdominal pain and weakness in the lower limbs. She had developed lower abdominal pain radiating to the lumbar region, along with gradually deteriorating paraparesis 24 hours prior to her presentation. The patient's past medical history included a colectomy 17 years previously, due to endometriosis.

In the emergency department, the patient was anuric and tachycardic. Physical examination revealed diffuse abdominal tenderness on deep palpation and mild rebound (rigidity/tenderness). Digital rectal examination revealed stenosis of the colectomy's anastomosis. Neurologic examination revealed asymmetric paraparesis and hyposthesia in the lower limbs, affecting hip extension, knee flexion, ankle dorsiflexion, plantarflexion, eversion and big toe extension, with brisk tendon reflexes in the knees but absent in the ankle, in keeping with bilateral sciatic neuropathy, worse on the left. Laboratory tests revealed leukocytosis and impaired renal function [WBC = 37.7 K/μl, 94.3% neutrophils, creatinine = 2.8 mg/dl]. Ultrasound and CT scan of the abdomen and pelvis was performed, which demonstrated a gas filled cavity rectal dilatation, pyeloureteral dilatation, in addition to free fluid and stranding of the perirenal area bilaterally, in keeping with obstructive uropathy, attributed to bilateral compression of the ureters by the gas filled cavity initially presumed to be dilated rectum (Fig. 1).

Bilateral nephrostomies were inserted. In the subsequent 24 hours the patient deteriorated with acute abdomen, bilateral sciatic neuropathy and sepsis. MRI and subsequent CT scan of the pelvis were performed, both of which demonstrated a sizeable (13 × 8 × 8 cm), thick-walled, enhancing, true rectal diverticulum, originating from the right lateral rectal wall, accompanied by extensive inflammation of pelvic structures (Fig. 2A and B, 3). Part of the small bowel was also found attached to the diverticulum, resulting to inflammation and ileus.

The patient underwent exploratory laparotomy. A loop colostomy was made in the descending colon, in order to confront the acute abdomen and to decompress the obstruction of the upper rectum. The
A diverticulum was detected, strongly attached to the postperitoneum (Fig. 4). A peritoneal lavage was performed and a soft discharge was placed deep in the pelvis. We decided neither to excise nor to drain the diverticulum due to its spoil and fragile walls. The patient stayed in the ICU until the third post-operative day. She had an uncomplicated postoperative period although her neurologic symptoms were present and mildly deteriorated on the fifth post-operative day. The patient elected to self-discharge and to continue her treatment in France, her country of origin. Unfortunately, she was lost to follow up.

3. Discussion

Diverticular disease of the colon is a common condition developed countries, affecting 50% of the population aged above 80. Colonic diverticula are acquired herniations of the mucosa and part of the submucosa through the muscularis propria. Diverticula are more...
In our case, focal weakness at the point of colectomy’s diverticula \([1,6]\). Resection of the distal rectum, in operations like the StARR or the Longo techniques, is total and extends to the circular time. In our case, focal weakness at the point of colectomy’s diverticula has never been reported before. Asymptomatic patients do not require treatment, whereas symptomatic rectal diverticulosis necessitates surgical intervention, if possible \([2,3,7,8]\). Acute excision or drainage of the diverticulum was not possible in our case, since the diverticular walls were spoiled, thus making the definitive surgical treatment of the diverticulum extremely dangerous.

In conclusion, clinicians should be aware of symptomatic rectal diverticulosis as a rare but potentially clinically significant complication of rectal surgery. Operations in the rectal wall which affect either the continuity or the muscular lining, may form points of least resistance, thus predisposing for the development of rectal diverticula. In our case, it emerged clinically as a large retrorectal abscess, requiring prompt intervention.

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**Publication Ethics.**

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**Guarantor**

Emmanuel Chrysos MD PhD FACS.

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**Consent**

The patient has given consent for possible publication of this case report.
Patient's consent

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The Authors declare that have no Conflict of Interest.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.amsu.2019.11.015.

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