



**IATROGEN RECTAL PERFORATION DURING ENDOSCOPIC
RETROFLEXION TREATED WITH ENDOSCOPIC CLIPS**

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| <p>Article Info <i>Received 15/10/2015</i> <i>Revised 27/11/2015</i> <i>Accepted 22/12/2015</i></p> <p>Key words: Retroflexion,</p> | <p>ABSTRACT Retroflexion in the rectum is an essential part of flexible sigmoidoscopy and colonoscopy. Iatrogenic rectal perforation caused by retroflexion is rare and the published literature is limited to case reports. This case report is one of few that presents a large iatrogenic rectal perforation caused by retroflexion with signs of intraperitoneal contamination (intraperitoneal air) on CT-scan, successfully managed with endoscopic clips. Endoscopists and surgeons should be aware that rectal perforation during retroflexion is rare, and most cases can be successfully managed endoscopically.</p> |
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INTRODUCTION

Iatrogenic perforation of the gastrointestinal tract during endoscopy is defined as the presence of gas or luminal contents outside the gastrointestinal tract [1]. Iatrogenic perforation has been reported in 0.03%-0.8% of diagnostic colonoscopies and flexible sigmoidoscopies [2]. The risk of perforation increases (up to 5%) in advanced therapeutic colonoscopy [3].

The European Society of Gastrointestinal Endoscopy (ESGE) recommends that complex Endoscopic Mucosa Resection (EMR), Endoscopic Submucosal Dissection (ESD) and balloon dilatation procedures should be considered to carry increased risk of colorectal perforation. Older age, co-morbidity, inflammatory colonic disease, use of hot biopsy forceps, and endoscopist inexperience are other significant risk factors for iatrogenic perforations [4].

Retroflexion of the endoscope to investigate the distal rectum is considered an essential part of colonoscopy or flexible sigmoidoscopy [5, 6]. Rectal perforation caused by retroflexion is rare and the published literature is limited to case reports [7–15]. In most cases the perforations were in lower rectum with no signs of intraperitoneal perforation. Most cases were treated endoscopically with endo-clips and with intravenous antibiotics, but without surgery.

Case Report:

An 87-years old woman underwent a flexible sigmoidoscopy in the evaluation of rectal prolapse. The sigmoidoscopy revealed sigmoid diverticulosis. At the end of the procedure retroflexion in the rectum was performed. When straightening the endoscope an approximately 2-3 cm in diameter large tear perforation of the right rectal wall was visible approximately 10 cm from the anal verge (figure 1). A low-dose CT scan was immediately performed revealing a large amount of retroperitoneal and perirectal air, but also a small amount of intraperitoneal air (figure 1). The patient did not present clinical signs of peritonitis. The decision was made to try endoscopic treatment. The tear was too large to adapt the mucosal edges, but the seromuscular layer was easily identified and successful seromuscular closure of the perforation was obtained by application of multiple endoscopic clips, gradually closing the perforation from the proximal to the distal edge (figure 2). The patient was admitted to the department of Surgery for further observation and treated with broad-spectrum intravenous antibiotics (piperacillin / tazobactam and metronidazole). A control low-dose CT scan of the abdomen was performed the following day showing decreasing amounts of retro –and intraperitoneal air. The postoperative course was uneventful and the patient was discharged at day 3. At 6 months follow up the patient was asymptomatic.



Figure 1. CT-scans with perirectal air and intraperitoneal air above the liver.

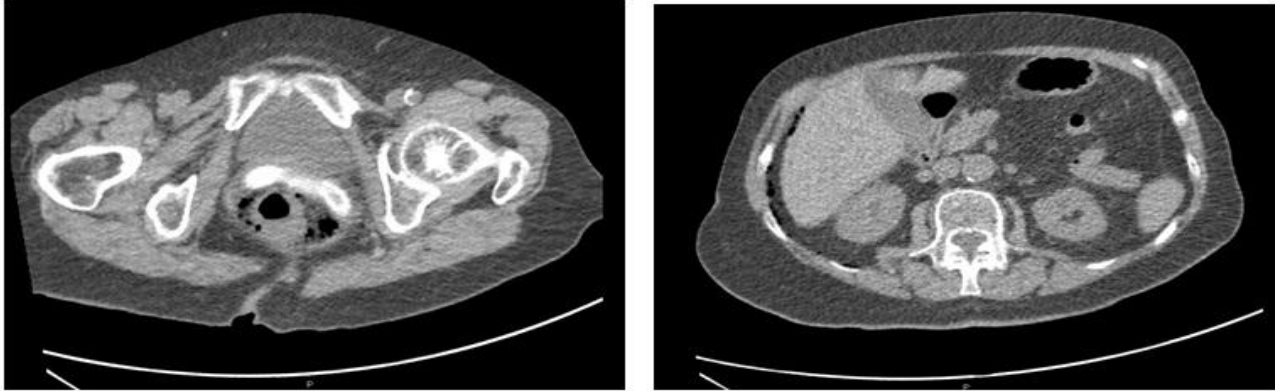
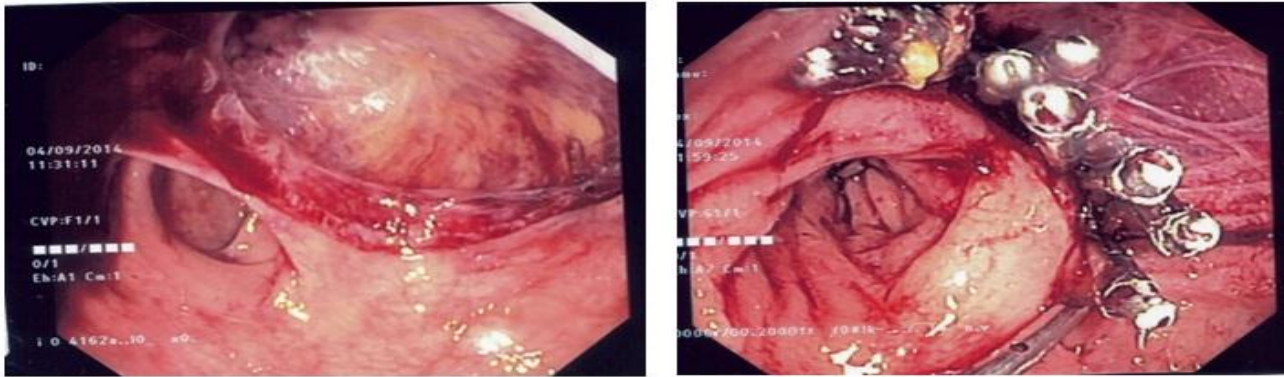


Figure 2. The rectal perforation and the seromuscular closure with endoscopic clips



DISCUSSION

This case report is one of very few reports on a large rectal perforation (>2cm) with intraperitoneal air caused by retroflexion of the endoscope during flexible sigmoidoscopy, successfully closed with endoscopic clips [15]. It shows that surgery is not always needed even in patients with free intraperitoneal air. The ESGE recommends endoscopic treatment of iatrogenic colorectal perforations if possible, in close collaboration between endoscopists and surgeons. Surgical treatment is recommended when endoscopic treatment fails or if the patient's clinical condition is deteriorating [4]. Ahlawat et al. recommends endoscopic clips for rectal perforations caused by retroflexion and state that the need for surgery, morbidity and mortality is lower than for other types of iatrogenic perforations during colonoscopy [8]. It is unlikely that there will be controlled trials on iatrogenic rectal perforations and management strategies must be based on results from other types of perforations and experiences from case reports such as this one.

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CONCLUSION

Retroflexion in the rectum during colonoscopy and sigmoidoscopy improves visualization and detection of pathology in the lower rectum. Endoscopists and surgeons should be aware that iatrogenic perforation caused by the retroflexion manoeuvre is rare, and most cases can be successfully managed endoscopically.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

STATEMENT OF HUMAN AND ANIMAL RIGHTS

All procedures performed in human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. This article does not contain any studies with animals performed by any of the authors.



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