Letters to the Editor

Treatment after iatrogenic colonoscopic perforation, is the laparoscopic approach a good option?

Key words: Iatrogenic perforation. Colonoscopy. Laparoscopic surgery.

Dear Editor,

During the last years, the number of colonoscopies has increased, both diagnostic and therapeutic, causing a greater number of iatrogenic complications, although with low incidence. Perforation is a rare complication with frequency estimated in the range of 0.03% to 0.9% for diagnostic and during therapeutic procedures up to 3% in the various published series, with morbidity (20-40%) and mortality (0-25%) (1). The management of iatrogenic colonoscopic perforation is diverse and controversial, since it is an uncommon complication and series published are short. The laparoscopic surgical treatment is an option which has not yet been well evaluated (2).

Case reports

A retrospective review of all patients who underwent urgent surgical treatment for colonoscopic perforation between 2009 and 2014 was performed. We identified 14 cases, 9 men and 5 women, with mean age 67.1 years (range 39-87 years). Diagnostic colonoscopy involved 6 patients, and the remaining 8 had undergone a therapeutic colonoscopy (5 associated polypectomies, 1 marking previous surgical treatment, and 2 associated sclerotherapy). All of them presented symptoms of abdominal pain. Eight patients (57%) were diagnosed in the first eight hours, 6 of them were suspected during colonoscopy. Thirteen patients underwent CT, 6 of them the perforation location was clear, and 5 of them was presumable. The perforation was relatively small in 12 cases, but in one patient the perforation was longer than half of the colon’s circumference, and another one was an 8 cm linear perforation in antimesenteric side. Most perforations occurred in the sigmoid colon (8 cases), 5 in cecum, and one in the upper rectum. All patients underwent surgical treatment (7 laparotomy and 7 laparoscopic repair) and primary suture and protection by omentum was the most common treatment (6 patients). Four patients required stoma, one of them was present before surgery and another was a diverting loop ileostomy. In 13 patients, drainage was used. Nobody required a new surgical procedure, but 5 patients presented postoperative morbidity, without mortality. The mean hospitalization duration was 11.7 days (range 6-38 days), but in laparoscopic procedures was only 8 days.

Discussion

In order to choose an optimal treatment we have to consider the underlying pathology of every iatrogenic perforation, type of perforation, time of evolution, previous bowel preparation, the degree of peritonitis and the patient’s clinical status.

In every case described, in addition to the procedure statement realized by endoscopist, the CT helped to locate the place of perforation, in addition to guidance on the existing state of intra-peritoneal inflammation especially in cases where diagnosis has not been performed during colonoscopy. (3) Makawaro et al. (4) has a simple and useful algorithm that can guide the management of patients with iatrogenic perforation after colonoscopy, considering a laparoscopic treatment. In our group, 6 of the 7 patients followed this algorithm before its publication, because it respects basic and general principles of the indications of laparoscopic surgery. The only patient who did not follow the algorithm was because he has not preoperative CT.

Some years ago, laparotomy was the preferred approach in these cases, frequently associated with colostomy, which meant
a worse quality of life for patients, as we have seen in our experience in the surgical treatment of iatrogenic colonoscopy perforation, both in the need of stoma and hospital stay for instance, showing the benefits of laparoscopic approach. In the last years, there have been other alternatives that use endoscopy, as clips (5). Even if they still have not been well evaluated, there are limitations, both technical and the availability and/or experience and sufficient training of the endoscopist to do it. In our group, 8 of the 14 patients (4 out of 7 patients in which laparoscopic treatment was performed) perforation was not evidenced during colonoscopy, and diagnosis was delayed, so in these cases the endoscopic repair would be limited.

Primary laparoscopic repair is a feasible and safe procedure (6), if another technique is not required by underlying pathology. So, the laparoscopic approach in patients with good clinical condition and good bowel preparation, is a good alternative, and always will depend on the experience of the surgeon (7).

Laparoscopic treatment is a good alternative as initial treatment in iatrogenic perforation after colonoscopy, provided the clinical situation allows it, existing always the conversion possibility and valuing laparotomy as initial treatment when there is an advanced peritonitis or patients with previous abdominal surgery.

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References