Journal of Visceral Surgery (2015) 152, 211—215

Available online at
ScienceDirect
www.sciencedirect.com

Elsevier Masson France
EM|consulte
www.em-consulte.com/en

ORIGINAL ARTICLE

Sigmoid stricture associated with diverticular disease should be an indication for elective surgery with lymph node clearance

A. Venara[a,b,*], L. Toqué[a,b], J. Barbieux[a,b], E. Cesbron[c], C. Ridereau-Zins[d], E. Lermite[a,b], A. Hamy[a,b]

[a] *L'UNAM, University of Angers, 49000 Angers, France*
[b] *Visceral Surgery Department, University Hospital of Angers, 4, rue Larrey, 49933 Angers Cedex 9, France*
[c] *Department of Hepato-Gastroenterology, University Hospital of Angers, 4, rue Larrey, 49933 Angers Cedex 9, France*
[d] *Department of medical imaging, University Hospital of Angers, 4, rue Larrey, 49933 Angers Cedex 9, France*

Available online 6 May 2015

KEYWORDS
Diverticulitis;
Non-malignant stricture;
Management;
Quality of life;
Sigmoid colon

Summary
Background: The literature concerning stricture secondary to diverticulitis is poor. Stricture in this setting should be an indication for surgery because (a) of the potential risk of cancer and (b) morbidity is not increased compared to other indications for colectomy. The goal of this report is to study the post-surgical morbidity and the quality of life in patients after sigmoidectomy for sigmoid stricture associated with diverticular disease.
Method: This is a monocenter retrospective observational study including patients with a preoperative diagnosis of sigmoid stricture associated with diverticular disease undergoing operation between Jan 1, 2007 and Dec 31, 2013. The GastroIntestinal Quality of Life Index was used to assess patient satisfaction.
Results: Sixteen patients were included of which nine were female. Median age was 69.5 (46—84) and the median body mass index was 23.55 kg/m^2 (17.2—28.4). Elective sigmoidectomy was performed in all 16 patients. Overall, complications occurred in five patients (31.2%) (4 minor complications and 1 major complication according to the Dindo and Clavien Classification); none resulted in death. Pathology identified two adenocarcinomas (12.5%). The mean GastroIntestinal Quality of Life Index was 122 (67—144) and 10/11 patients were satisfied with their surgical intervention.

* Corresponding author at: L'UNAM, University of Angers, 49000 Angers, France.
E-mail address: auvenara@yahoo.fr (A. Venara).

http://dx.doi.org/10.1016/j.jviscsurg.2015.04.001

Conclusion: Sigmoid stricture prevents endoscopic exploration of the entire colon and thus it may prove difficult to rule out a malignancy. Surgery does not impair the quality of life since morbidity is similar to other indications for sigmoidectomy. For these reasons, we recommend that stricture associated with diverticular disease should be an indication for sigmoidectomy including lymph node clearance.

Background

There is still considerable controversy about best practices for elective management of left-sided colonic diverticular disease. In 2000, the American Society of Colon and Rectal Surgeons (ASCRS) proposed guidelines with the intent of preventing perforation: the recommendations were to perform sigmoid resection after two episodes of acute diverticulitis, after a single episode in young patients or when there were concurrent complications, such as stricture or fistula [1]. In 2006, the French High Authority of Health (HAS) recommended sigmoid colon resection after three episodes or for complicated diverticulitis [2]. In 2006, Rafferty et al. proposed a more individual and conservative approach [3]. Finally, in 2010, Klarenbeek et al. proposed surgical intervention for patients with stricture, fistula or recurrent diverticular bleeding or in high-risk patients [4].

This complication is quite rare as only 0.09% of patients with diverticular disease develop stricture [5]. While recommendations have evolved over time, the only literature on stricture in this setting, to our knowledge, has been in case reports; some of these demonstrated the difficulties in diagnosis and particularly the difficulty of differentiating between diverticulitis and cancer [6]. Another concerned a patient with toxic megacolon and acute ischemia due to sigmoid stricture [7]. Diverticular disease is responsible for 3.6% of large bowel obstructions [8].

In light of these arguments, stricture should be an indication for surgery. Colectomy for sigmoid diverticulitis, however, is not without complications. Levack et al. reported a 24.8% incidence of fecal incontinence and 19.6% incidence of fecal urgency after sigmoidectomy [9]. On the other hand, Jarrar and Church reported improved quality of life for patients with chronic abdominal pain [10].

There is no consensus concerning the management of non-complicated stricture due to sigmoid diverticular disease.

The aim of this paper is to evaluate the outcomes of sigmoidectomy in patients with diverticular disease and associated stricture.

Patients and methods

This is a retrospective observational monocenter study of patients with a preoperative diagnosis of stricture secondary to diverticular disease who underwent sigmoidectomy between Jan 1, 2007 and Dec 31, 2013; data were abstracted from their hospital and operative records.

This study was approved by the Ethical Committee of the University Hospital of Angers.

All patients underwent colonoscopy and/or CT virtual CT colonoscopy to establish the diagnosis; this was confirmed postoperatively by pathology findings.

Due to the presence of stricture, preoperative tissue diagnosis was not always available and the presumption of benign disease was based on CT-scan or virtual CT colonoscopy.

Patients operated on for diverticular disease without stricture or for preoperatively-diagnosed malignant stricture were not included in this study.

The diverticular origin of the stricture was supported by CT findings or colonoscopy showing diverticular disease, a medical history of acute episodes of diverticulitis and a preoperative benign histology (whenever available).

All data regarding demographics, obesity, medical history, natural history of diverticular disease, stricture management and follow-up were recorded in an anonymous electronic database.

Complications were categorized according to the Dindo and Clavien Classification [11]; grades 1 or 2 were considered as minor complications while grades 3 and over were considered as major complications.

Patients were contacted by phone, during April 2014, to complete the French-validated GastroIntestinal Quality of Life Index (GIQLI) [12,13], therefore assessing their current quality of life, and to ask if they regretted their surgery.

Statistical analysis was performed using SPSS software 15® and Microsoft Excel Software®.

Results

During the 7-year period, 210 sigmoidectomies were performed for diverticulitis; 16 of these patients (7.6%) had the diagnosis of stricture. Of these, nine were women and seven were men. Median age was 69.5 (range: 46—84). Median body mass index was 23.55 kg/m^2 (17.2—28.4). The medical history of patients is reported in Table 1.

Sigmoid stricture was identified via colonoscopy (impossible to pass a normal adult colonoscope) and/or virtual CT colonoscopy (greater than 50% reduction of lumen diameter).

Two patients had no symptomatic history of diverticular disease who were asymptomic before the diagnosis of stricture: one patient underwent surgical exploration for colonic obstruction and the other was explored by colonoscopy for bleeding per rectum.

The mean number of flares of diverticulitis before diagnosis was 1.3 (0—15).

Fourteen patients presented with symptoms of diverticulitis. Among these, the first episode of diverticulitis occurred a median of 7 (range 3—240) months before the diagnosis of stricture.

Symptoms preceding the diagnosis of stricture included diarrhea, constipation, bowel obstruction and/or abdominal pain (Table 2).