Diverticular Disease – Update 2006

M. E. Kreis, K. W. Jauch

Definition, Epidemiology and Clinical Course

A commonly accepted uniform definition of diverticular disease is not available. The mere presence of diverticula which are herniations of the mucosal layer through the colonic wall is referred to as diverticulosis. It is debatable whether diverticulosis on its own without further complications causes symptoms and whether this condition should be named diverticular disease. However, problems secondary to diverticulosis such as diverticulitis, perforation, fistula, obstruction and bleeding definitely justify the use of the term diverticular disease, which, then, may also be classified as complicated diverticular disease.

Diagnostics

The diagnostic workup for diverticular disease has been virtually unchanged throughout recent years. With the high-resolution CT scanners that are available nowadays, most clinicians and radiologists prefer the CT scan to diagnose diverticula compared with the more time-consuming barium enema, although the latter is still a useful examination. Furthermore, imaging of diverticular is also elegantly possible with modern MRI scans [1]. It is of note that colonoscopy, which frequently detects diverticula as an irrelevant finding during screening for colorectal cancer, was found to be a useful procedure even for acute diverticulitis in order to diagnose associated pathology [2]. In this study, the rate of perforation was low so that this risk does not really justify renouncing colonoscopy during an acute attack.

Operative Versus Conservative Treatment

There is still consensus that the patients should not undergo sigmoid colectomy after the first attack of uncomplicated diverticulitis. Elective sigmoid colectomy is recommended for patients who have a second attack. This algorithm is now further supported by a recent study reporting data from a large

database [3]. In this study, 13.3% of the patients who had an initial episode of acute diverticulitis had a recurrence, while this rate went up to 29.3% in those patients that had not been operated on following two episodes. It is debatable whether younger patients should be operated on earlier, i.e., upon initial presentation with acute diverticulitis. Approximately half of the studies that address this issue argue in favor of this approach [4–7], while the other half argue against it [8–11]. This issue, therefore, remains unsettled.

The historic paper by Farmakis et al. [12] that reported lethal complications in almost 10% of patients during recurrent divertiular was recently challenged by a retrospective study published by Müller et al. [13] with 363 patients and a 12-year follow-up. In their study, only two patients died secondary to diverticular disease during follow-up, which supports the concept that patients should be operated on to achieve relief of symptoms rather than to prevent lethal complications.

Choice of Surgical Approach and Procedure

For recurrent diverticulitis, elective sigmoid colectomy with resection below the recto-sigmoid junction and anastomosis to the upper rectum remains the gold standard. The standard for perforated diverticulitis in staged Hinchey III and IV stages was extensively discussed in recent years. Salem [14] performed a meta-analysis including 98 studies that reported on the surgical approach for patients with these stages. While sigmoid colectomy with primary anastomosis (with or without ileostomy) has a lower morbidity (23.5 vs 39.4%) and a lower mortality (9.9 vs 19.6%) compared with the Hartmann operation (including operations for reanastomosis), a prospective randomized trial is still lacking. Thus, although no selection bias was identified in this review, the evidence for the recommendation to perform a sigmoid colectomy with primary anastomosis even in Hinchey III and IV stages remains limited.

Technical Aspects of Surgery

Laparoscopic sigmoid colectomy was shown to be a feasible and an acceptable alternative to open sigmoid colectomy for recurrent diverticulitis in the past. Conversion rates, morbidity and mortality following laparoscopic sigmoid colectomy were shown to be volume-dependent [15]. The laparoscopic technique has the potential result in reduced complications, reduced hospital stay and better cosmetic results compared with the open operation; however, it also carries the potential for increased operative time and increased treatment costs [16]. As the available comparative, nonrandomized

studies have a selection bias, definitive conclusions are not possible at this time; thus, we need to wait for the results of ongoing randomized-controlled trials before the superior technique can be determined.

Peri- and Postoperative Care

Several publications addressing the potential of fast-track surgery following surgery for colorectal cancer were published in recent years [17, 18]. No reports are available addressing specifically the peri- and postoperative care following sigmoid colectomy for recurrent diverticulitis. As care after surgery for cancer of the sigmoid colon is similar, multimodal rehabilitation, i.e. fast-track surgery after sigmoid colectomy for recurrent diverticulitis, is likely to have a comparable advantageous effect on patient recovery. Interestingly, Basse et al. [19] demonstrated in a recent study that the laparoscopic approach does not provide additional advantages regarding patient recovery compared with open surgery, when fast-track principles are strictly followed.

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