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A Rare Manifestation of Perforated Diverticulitis: Parastomal Subcutaneous Abscess

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ABSTRACT

Perforation is a serious complication of diverticular disease. The sigmoid is the main affected anatomic site of perforated diverticulitis and sigmoid resection followed either by Hartmann procedure or primary anastomosis are the standard surgical approaches. Surgery, however, does not cure diverticular disease. About 50% of patients have residual diverticula. The morbidity of residual diverticula appears to be low [1]. However, adequate follow-up studies on recurrent diverticulitis after surgery are lacking. We report a rare case of recurrent perforated diverticulitis in the subcutaneous tissue in proximity of the colostomy after a Hartmann procedure for perforated diverticulitis of the sigmoid colon.

An 87-YEAR-OLD OBESE WOMAN (body mass index 41) was sent to our hospital with complaints of dyspnea and chest pain. She had a history of perforated diverticulitis of the sigmoid colon treated with sigmoid resection, closure of the rectal stump, and creation of an end-colostomy (Hartmann procedure) 16 years ago. Previous restoration of continuity was complicated by anastomotic dehiscence, resulting in reoperation and a permanent end-transverse colostomy in the left abdomen. At barium enema before and after the second operation, residual diverticula were noticed.

Physical examination revealed a painful tumor, with redness of the skin, in the left lower quadrant of the abdomen between the colostomy and the scar of the midline laparotomy. There were no signs of peritonitis. Body temperature was 38.4°C and laboratory investigations revealed leukocytosis and increased C-reactive protein. No abscess was found by ultrasound investigation.

Initially a deep skin infection was suspected, secondary to epidermal lesions caused by stoma adhesives with systemic sepsis. Treatment was started, including intravenous broad-spectrum antibiotics and fluid resuscitation.

Because of worsening of her medical condition and signs of subcutaneous abscess by physical examination, surgery was undertaken the next day. A parastomal abscess was found associated with perforated diverticulitis. There was a short sinus tract to the bowel in the subcutaneous tissue. Segmental colectomy was carried out and a new end-transverse colostomy was created at the same location. That particular operation was chosen because extensive intra-abdominal adhesions limited the extent of dissection. Signs of infection disappeared rapidly, the wound healed secondarily, and the patient recovered uneventfully. Histological examination of the specimen showed peridiverticulitis with necrosis and perforation.

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DISCUSSION

To our knowledge a case of diverticulitis with stomal perforation into the subcutaneous tissue has not been described before. Reporting this case is valuable because of its rarity, the initial diagnostic problems, and the dilemmas faced in the approach to residual diverticula in patients previously operated for perforated diverticulitis.

The diagnostic problems have general and local aspects. The dyspnea and chest pain appeared to be signs of sepsis secondary to a local infection. Severe obesity probably aggravated her pulmonary problems. The phlegmon was mistakenly diagnosed as infection secondary to a skin lesion related to stoma adhesives. Stomal leakage in particular may contribute to the development of a phlegmon, although this is associated mainly with small bowel enterostomies.

Ultrasound did not reveal a parastomal abscess. This diagnostic tool, however, is less accurate when applied in the region of an enterostomy because of air in the intestine. In retrospect, we believe that an abscess was present at the time of admission based on the clinical course and findings at laparotomy.

Residual diverticula in the remaining colon were diagnosed previously in this patient, but were not treated. This is understandable considering her general condition at that time, her age, the lack of inflammation, and the expectation that a subsequent operation would be complicated. The natural history of untreated diverticular disease of the colon has been addressed previously [2]. It is estimated that 10–25% of people with colonic diverticulosis will suffer inflammation at some point of their lives. The recurrence rate after an episode of diverticulitis managed non-operatively is 7–37% [2,3]. Recurrences, however, are not easily defined since patients who previously suffered bouts of diverticulitis are more likely to experience subsequent episodes of recurrent short-lived abdominal pain and altered bowel function that may be diagnosed mistakenly as recurrent diverticulitis [4].

There are hardly any data on recurrent diverticulitis after previous surgical management. Moreaux [5] reported 3% of patients with recurrence of diverticular disease after surgery for diverticulitis and 11% with persistent symptoms. A relation of the symptoms with residual diverticula was not established. In a group of 147 patients undergoing elective resection, between 1957 and 1975, no patient required a second operation [1]. Patients' age and mortality, however, were not mentioned in that study. These findings nevertheless suggest that the incidence of recurrence is low.

A recurrence rate of 8% was reported in a recent study on clinical and functional results after resection for diverticular disease [6]. Functional bowel symptoms were more often present in elderly patients, and were associated with a lower satisfaction score. Patients younger than 60 years had a significantly better outcome. Unfortunately, recurrence rate related to age was not assessed. In younger patients, more extended surgery may be warranted because of greater life expectancy, better physical condition [5–7] and the expectation of better outcomes. We have initiated a large retrospective follow-up study of patients operated on for diverticulitis in order to define the risk of recurrent diverticulitis and the optimal surgical strategy.

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