ISSN 0174-2470

Official Journal of
Deutsche Gesellschaft für Koloproctologie (DGK)
Berufsverband der
Coloproktologen Deutschlands (BCD)

May-June 1993
Volume 15

3-93

colo proctology

4-7 March 1994
Bad Homburg, Hotel Maritim

20th Coloproctological Meeting

of the Deutsche Gesellschaft für Coloproktologie and
Berufsverband der Coloproktologen Deutschlands e.V.
in cooperation with the
European Council of Coloproctology

EDITION NYMPHENBURG · PUBLISHERS · INTERNATIONAL EDITION

G.Mazzocconi, E. Sbaffi,
M. Campli, A. Matrone, V.A. Virno,
A. Stasio, P. Prezioso

Stercoral Perforation of the Colon

Stercoral perforation of the colon is defined as »a perforation of the bowel due to pressure from faecal mass« [6] It is not common, as complicated diverticulitis or an obstructing carcinoma more often undergo spontaneous perforation [8].
The first recorded stercoral perforation was by Berry in 1894. Since then, only 66 cases have been reported in the world literature [12]. However, the real incidence of this pathology cannot be conclusively ascertained because of the lack of a clear distinction between spontaneous perforation and idiopathic perforation, the latter including stercoral perforation.
Noussias [10] refers to spontaneous perforation as a perforation of the bowel caused by an evident colonic lesion, the term »idiopathic perforation« is therefore used in those cases where no evident pathology is present, as it develops in an apparently normal colon.

Case Report

A 38-year old man with a mental handicap was admitted to hospital in April 1987. The patient came from an asylum. He had always been in good health until a few days before admission when he began to have severe vomiting associated with generalised abdominal colic and constipation. On the day of admission the patient showed clouded sensorium and peritonitis facies; his temperature was 39°C; pulse rate 130 beats/min.; blood pressure 100/60 mm Hg. The abdomen was tender and there were no bowel sounds. Rectal examination showed an empty ampulla and a tender Douglas pouch. Laboratory data included haemoconcentration (Ht 46%; Hb 15 g/dl; GB 15,700; creatinine 2,4 mg/dl; azotaemia: 60 mg/dl). Plain radiography of the abdomen showed the presence of free gas in the subdiaphragmatic areas. The patient then underwent operation.
A midline laparolomy was performed. On opening the peritoneum, gas and purulent malodorous fluid was found in the whole peritoneal cavity. There was a perforation about 8 mm in diameter in the descending colon, from which a faecaloma protruded. The transverse colon, part of the descending and ascending colon and an extended area of the sigmoid colon contained a large number of brown hard faecalomas measuring roughly 9 x 6 cm each. A 30 cm resection of the descending colon was performed, which was followed after mobilisation of the left colonic flexure by a left colostomy and a distal mucous fistula, all faecalomas proximal and distal to the perforation were removed manually. Intraoperative peritoneal lavage with a saline solution and antibiotics followed. The resected colon showed extensive ulceration above and below the perforation. Histologic examination showed typical decubital ulcers without chronic inflammation. In the first 8 hours after the operation, an infusion of about 6 l of fluid

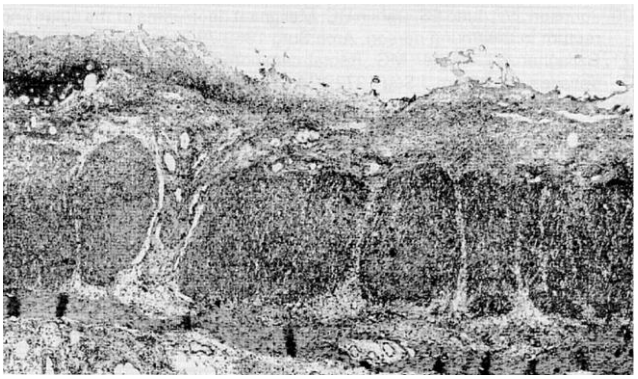

Fig.1: Low-magnification microphotography showing the left colonic wall. Wide ulceration penetrating mucosa and submucosa up to the muscle coat. Inflammatory infiltration separates muscle fibres and involved serosa

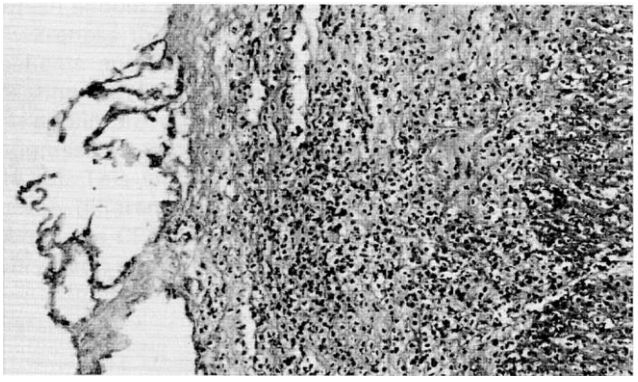

Fig.2: Detail of Fig.1. Acute inflammatory infiltration with oedema of mucosal, submucosal coat and part of muscle layer

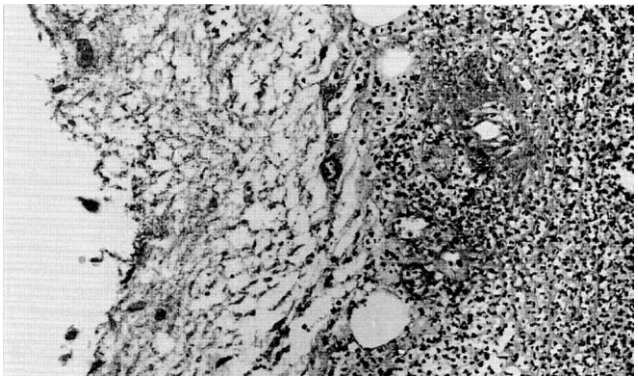

Fig.3: Centre of ulcer with marked infiltration of granulocytes and fibrinoid necrosis of the small submucosal vessels

was given to restore adequate diuresis. The postoperative period was complicated by a left pleural effusion, which resolved after medical treatment.
Many irrigations of the distal colonic stump were performed. The patient was discharged 20 days after the operation. Bowel continuity was restored after six months.

Discussion

Chronic constipation, the frequent ingestion of substances such as antacids (aluminium hydroxide) [2], codeine [4], amitriptyline [1], tranquillizers [3.13], corticosteroids [1], clay mixture and paper in people with a pica for paper [5] may lead to stercoral perforation. However, it must be emphasised that faecalomas, which may cause a primary ischaemic necrosis, may persist in spite of an apparently normal bowel function. Of the 66 patients [12] reviewed, only 39 had a history of chronic constipation before perforation. 23% came from asylums or nursing homes [12]. The mean age was 60 years. with a range from 16 to 89 years [12]. The 66 cases reported in the literature and our case show that preoperative diagnosis of stercoral perforation is rare (17/66 cases) [12], because the incidence is low and the symptoms not clearly detectable. All patients presented features of acute abdominal conditions with diffuse peritonitis (80%) or faecal peritonitis (20%). The most common site for the perforation was the sigmoid colon (47%), followed by the rectum (30%), caecum (9%), transverse colon (7%), and descending colon (5%). All perforations except one occurred on the antimesenteric border of the colon. Perforations were single in 79% and multiple in 21% of the patients. A preoperative aetiological diagnosis is purely academic considering the seriousness of the clinical picture of faecal peritonitis, which is characterised by a high mortality rate when not treated by prompt surgery. Of the 66 patients 52 underwent surgical intervention with a 35% mortality. The mortality according to the type of operative treatment was 57% after the closure of the perforation and proximal colostomy, 43% after exteriorisation and 32% after exteriorisation and colon resection. The operation with the lowest mortality seems to be colon resection with proximal colostomy and Hartmann's procedure with a distal mucous fistula. In our opinion, although the choice of operation depends on where and when the perforation occurs and on the technical skill of the surgeon [7], a successful result depends also on other elements, such as: a) manual evacuation of the faecalomas which otherwise could make postoperative bowel movement difficult; b) colon resection, including all the decubitus ulcers which are frequently found in the area surrounding the perforation.

In our opinion the best approach in the treatment of a stercoral perforation of the colon consists of colon resection, mobilisation of the left border of the colon, manual evacuation of faecalomas, left colostomy and terminal mucous fìstula (for better lavage of the stump), followed by careful postoperative care in order to restore the balance of fluids and renal function, as in all cases of peritonitis.

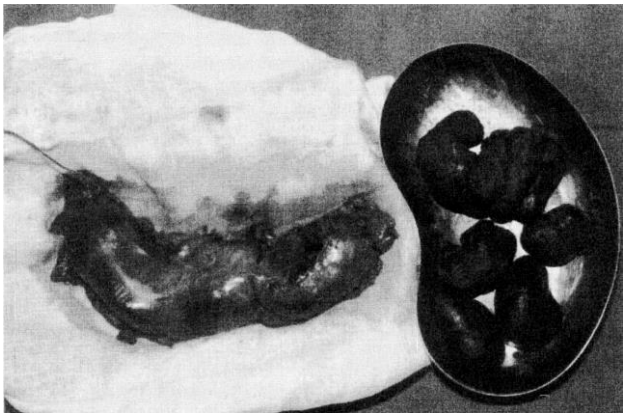

Fig.4: Surgical specimen and faecalomas found in the peritoneal cavity

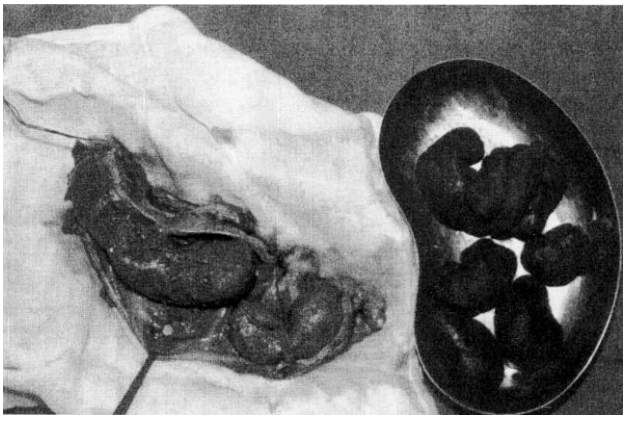

Fig.5: Surgical specimen with faecalomas

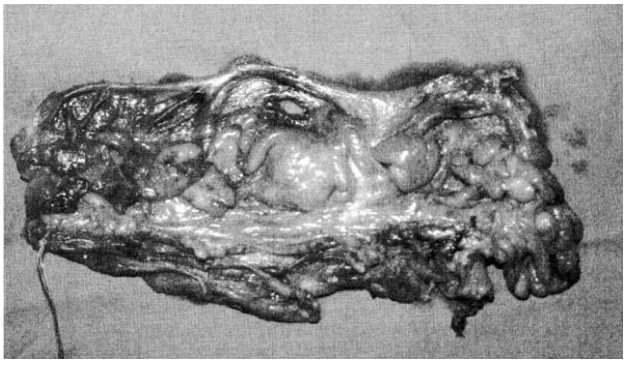

Fig.6: Wall perforation

To avoid the development of this condition it is advisable to check the regularity of the bowel, above all in the elderly, the debilitated, the bedridden and the mentally handicapped people, who are best treated with lactulose prescribed to encourage regularity of the bowel movements.

References

1. Grinvalsky HT, Bowermann CI, Stercoraceceous ulcers of the colon: rela-tively neglected medical and surgical problem. JAMA 1959;171:1941-6
2. Havia T. Non-traumatic perforations of the colon. Acta Chir Scand 1971;137:375-9.
3. Serpell JW, Nicholls RJ. Stercoral perforation of the colon. Br J Surg 1990;77:1325-9.
4. Noussias MP. Spontaneous rupture of the bowel. Br J Surg 1962; 50:195-8
5. Aronsson H. Non-traumatic perforations of the colon. Acta Chir Scand 1960;119:439-43
6. Gingold BS. Stercoral ulceration and perforation of the colon secondary to narcotics abuse. Am J Proct Gastroenterol 1981;32:5-6.
7. Aguillo JJ, Zinche H, Woods JE et al. Intestinal perforation due to fecal impaction after renal transplantation. J Uro 1976;116:153-5
8. Cass AJ. Stercoral perforation: a case of drug induced impaction. Br Med J 1978;2:933-4.
9. Wang S, Sutherland JC, Colonic perforarion secondary lo fecal impac-tion. Dis Colon Rectum 1977;20:355-6.
10. Graham PW, Stercoraceous perforation of colon - an unusual complica-tion of pica. Med J Aust 1976;2:385-6.
11. Guyton DP, Evans D, Schreiber H, Stercoral perforation of the colon. Concepts of operative management. Am Surg 1985;51:520-2

Received for publication on 15 August 1992

Authors

G. Mazzocconi, MD; E. Sbaffi, MD; M. Campli, MD; A. Matrone, MD; V.A. Virno; A. Stasio, MD; P Prezioso, MD
II Department of SurgerY
»Sandro Pertini« Hospital
Via Monti Tiburtini s.n. C.A.P
I-00157 Rome
Italy