Idiopathic Colonic Perforation in Adult—A Rare Case

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Received: 7 August 2008 / Accepted: 2 January 2009 / Published online: 16 November 2010
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Abstract Idiopathic perforation of normal colon in adults is rare. The cause for idiopathic perforation is not known. We report a case of idiopathic colonic perforation in adult who presented with sign and symptoms of perforative peritonitis. On laparotomy patient was diagnosed to have a colonic perforation. There was no causative factor for perforation in the patient. This case is reported because of rarity of this disease

Keywords Idiopathic colonic perforation · Adults

Introduction

Perforation peritonitis is one of the most common emergencies presenting to surgeons, and they are life threatening if not diagnosed and treated early. Perforation of the colon and rectum without etiology such as injury, malignant tumor, iatrogenic, diverticuli, and inflammatory disease is defined as the idiopathic perforation of the colon and rectum. Idiopathic perforation of the colon and rectum combines diffuse peritonitis caused by feces, and has poor prognosis.

We report a case of idiopathic colonic perforation. As it is rare, it is often misdiagnosed and has a high mortality rate. This case being presented for its rarity and to highlight that though rare, it can occur.

Case Report

A 45 years old male patient was admitted to the hospital with severe abdominal pain that had started 5 hours prior to

admission. Abdominal pain was associated with nausea and vomiting. Patient had passed motions early in the morning. Patient had never been admitted for any other complaints in past.

General examination revealed an acutely ill man with blood pressure of 130/70 mmHg, a pulse rate of 90/min, with normal temperature. On systemic examination the abdomen was tender to palpate and patient had guarding. Bowel sounds were absent. All the blood investigations were within normal limit. An erect X-ray abdomen revealed free air under diaphragm (Fig. 1). So with the diagnosis of perforation peritonitis, patient underwent laparotomy.

The peritoneal cavity had approximately 200 ml of free fluid, which was aspirated. Stomach, duodenum, and small bowel were examined, but perforation could not be located. A 5×3 mm perforation was seen on antimesenteric border of sigmoid colon (Fig. 2).

Edge biopsy of the perforation was taken and primary closure of the perforation was done in two layers. Drain was kept and abdomen was closed in layers. The post operative period was uneventful and patient was discharged on post operative day 7. The histological examination of the biopsy showed no specific disease responsible for perforation. In postoperative period, patient was enquired for any bowel complaints, foreign body insertion, trauma, etc. Patient was subjected to colonoscopy, which showed normal study. After thorough history and examination also the cause of perforation could not be detected.

Discussion

Idiopathic perforation of normal colon is a rare condition [1]. The usual causes of colonic perforation are diverticular disease, carcinoma colon, inflammatory bowel disease,

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Fig. 1 Erect Xray abdomen showing free gas under diaphragm

trauma, instrumentation, foreign body insertion and iatrogenic. Idiopathic colonic perforation is defined as absence of any causative factors as mentioned above. Sir Benjamin Brodie in 1827 pointed out first spontaneous rupture in normal colon [2].

Later on spontaneous rupture was also known as idiopathic perforation of colon. But J.A.Berry classified spontaneous perforation into stercoral and idiopathic perforation. Stercoral perforation of colon occurs due to hard impacted stools perforating the recto sigmoid colon by ischemic necrosis [3]. And for idiopathic perforation pathophysiologic basis is unknown. Several pathogenetic factors are considered responsible for idiopathic perforation of colon, like constipation, raised intra-abdominal pressure/

intraluminal pressure etc, but nothing has been proved yet [4]. Idiopathic colonic perforation usually is linear, with broken ends of muscular layer regular, and histology is normal [5].

Idiopathic perforation of colon usually occurs at distal large bowel i.e. recto sigmoid junction or sigmoid colon. The appearance of the perforation is clean cut or slit like. 79% of idiopathic colonic perforation occurs on antimesenteric border, with males more prone for perforation than females [4]. Patients usually present with abdominal pain, signs of peritonitis, septicemia and rectal bleeding. Pneumoperitoneum which is pathognomonic sign of bowel perforation is seen in only 20–50% patients of colonic perforation [3]. The diagnosis frequently was not made until the abdomen had been explored. However the history and the findings have usually conformed peritonitis.

The mortality rate of this disease is as high as 35% to 45% [6]. Perforation may lead to septicemic shock and multiple organ failure. So patients need to undergo surgery as soon as the disease is diagnosed. The types of surgeries are different depending upon the time of onset, degree of peritonitis and general physical conditions. The treatment includes primary closure with or without colostomy, Bowel exteriorization, resection anastomosis with or without covering colostomy or Hartmann's procedure.

In our case patient had idiopathic colonic perforation, as no cause was found even after detailed history and investigation. Patients post operative period was uneventful with no complications as he was diagnosed and treated early. Early correct diagnosis and appropriate surgical treatment options are key to improve the prognosis.

Fig. 2 Sigmoid colon perforation

References

1. Basile M, Montini F, Cipollone G, Errichi BM (1992) Spontaneous perforation of large intestine. *Ann Ital Chir* 63(5):625–629
2. Goligher J, Duthie H, Nixon H (1984) *Surgery of anus rectum and colon*, 5th edn. Bailliere Tindall, East Sussex BN21
3. Gordon PH, Nivatvon S (2007) *Principles and practice of surgery for colon, rectum and anus. Complications of colonic disease and their management*, 3rd edn. Informa Healthcare, New York, USA, pp 1150–1151
4. Kasahara Y, Matsumoto H, Umemura H, Shirafa S, Kuyama T (1981) Idiopathic perforation of sigmoid colon in Japan. *World J Surg* 5(1):125–128
5. Yang B, Ni H-K (2008) Diagnosis and treatment of spontaneous colonic perforation: analysis of 10 cases. *World J Gastroenterol* 14 (28):4569–4572
6. Serpell JW, Nicholls RJ (1990) Stercoral perforation of the colon. *Br J Surg* 77:1325–1329