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Case Report

Crohn's Disease Revealed by Acute Generalized Peritonitis

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Abstract

Crohn's disease (CD) is characterized by chronic transmural inflammation of the gastro intestinal tract. Free spontaneous perforation initiating CD is a rare life-threatening entity.

A 32-year-old patient with no past medical history, presented acute abdominal pain and vomiting. CT scan showed pneomoperitonum. Laparoscopic exploration revealed generalized peritonitis with perforation of the last ileal loop. The patient underwent ileocaecal resection with double stoma. The postoperative course was uneventful. The digestive continuity was restored after 3 months. In case of a peritonitis of unknown origin, the diagnosis of CD should be considered especially in young adults.

Introduction

Crohn's disease is a chronic inflammatory condition affecting the gastrointestinal tract [1] characterized by a transmural lesions [2]. Inaugural free spontaneous perforation in the peritoneal cavity is rare [2] complication

of CD but life-threatening and requires emergency surgery. Here, we report a case of Crohn's disease revealed by acute generalized peritonitis by perforation of the last ileal loop.

Case Report

A 32 years old female patient with no past medical or surgical history presented to the emergency department with onset of severe generalized abdominal pain of 2 days duration associated with fever and vomiting. On physical examination she was stable blood pressure was 110/80 mmHg, pulse rate was 94/minute, and body temperature was 37.4°C. Abdominal examination found a general abdominal guarding and rigidity. Digital rectal examination revealed the presence of soft stool.

Laboratory investigations showed elevated white blood cell count (18500/µl) and C-reactive protein level (291mg/l).

An abdominal CT scan was performed and revealed pneumoperitoneum and an intraperitoneal effusion of great abundance as well as a diffuse thickening enhancement of the peritoneal sheets. The ileal loops were distended associated with regular circumferential parietal thickening and submucosal edema.

Emergency surgery was indicated. The exploration of the abdominal cavity found, a free purulent peritonitis and perforation in the anti-mesenteric border at the ileum 40cm from the ileocecal valve. No obvious source of perforation was noted. An ileo-caecal resection followed by double colostomy with abundant peritoneal toilet was performed. The post- operative course was uneventful.

Histopathologic examination of the specimen showed chronic granulomatous ileitis lesions which is consistent with Crohn's disease.

Later an ileo-coloscopy was performed before restoring continuity.

The patient was kept in clinical and endoscopic remission under immunosuppressant: azathioprine at the dose of 2,5mg/kg/day.

Discussion

Crohn's disease is a chronic idiopathic inflammatory disease that can affect the entire gastro intestinal tract from mouth to anus, the most common being the terminal ileum and colon [3]. Several complications may occur including bowel strictures, intra-abdominal abscess as well as single or complex fistulous tracts that often penetrate into the intestinal and non-intestinal structures. The transmural nature of CD can cause localized perforation which can easily degenerate in generalizes peritonitis [3]. Free perforation of the small intestine is one of the less common and severe complication in CD [5]. It was initially described in 1935 [4] and occurs in less than 3% [6]. However, high incidence has been reported in Japanese patients (6,8%) [7] and Korean patients (6,5%) [8].

The originality of our case comes from the fact that peritonitis secondary to ileal perforation was inaugural in a patient with no history of IBD.

The diagnosis of peritonitis is easy but etiological research remains a real challenge [8]. In CD only 20% of patient have pneumoperitoneum on X-ray [9]. In the condition of high suspicion of perforation, an abdominal computed tomography (CT) should be performed.

With regard to the location of free perforation, most develop in the terminal ileum [4]. Other less common sites include other parts of ileum, colon, and jejunum [6]. In our case, site of perforation was terminal ileum.

The pathophysiology of free perforation in CD is unknown, it can be related to bowel distension with increased intraluminal pressure proximal to a stenosis or may occur due to bowel ischemia due to changes I the blood vessels associated with enteritis and/ or colitis without any intestinal dilation [8].

Surgical treatment consists on limited resection of the diseased bowel segment with primary anastomosis or temporary stoma [7] to prevent short bowel syndrome [7]. With this attitude the mortality rate improved to only 4% [7]. Simple suture of the perforation should be avoided because of the high postoperative mortality and complication rates [7]. Laparoscopic approach is considered the gold standard for the treatment of complicated CD.

In our case, we opted for an ileocecal resection with stoma, given the peritoneal contamination, the delayed restoration of digestive continuity was in our view a prudent decision.

Conclusion

Our report suggest that we should consider Crohn's disease when we face peritonitis of unknown origin. Free perforation is a fatal complication with significant morbidity and mortality if not identified and treated properly. Surgical approach depends on the site of perforation but conservatrice treatment is always the rule.

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