

Recurrent Spontaneous Colonic Perforation

Rekurren Spontan Kolon Perforasyonu

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ÖZET

Spontan kolon perforasyonu genellikle kronik konstipasyonu olan ileri yaş hastalarda görülen nadir bir klinik durumdur. Rekurren spontan kolon perforasyonu çok nadirdir ve spontan kolon perforasyonundan daha az görülür. Rekurren spontan kolon perforasyonu olgusunu sunmaktayız.

Anahtar Kelimeler: Spontan, perforasyonu, kolon, rekurren

ABSTRACT

Spontaneous perforation of the colon is a rare clinical condition usually found to occur in the overaged and associated with chronic constipation. Recurrent spontaneous perforation of colon is an extremely rare and lesser than spontan perforation of colon. We report a case of recurrent spontaneous colonic perforation.

Key words: Spontaneous, perforation, colon, recurrent

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Introduction

Spontaneous colonic perforation is a rare condition and defined as a sudden perforation of the colon in the absence of primary intestinal pathology such as tumours, diverticulosis, inflammatory disease, iatrogenic causes or trauma.¹ Recurrent spontaneous perforation is an extremely rare and lesser than spontaneous colonic perforation. We report a case of recurrent spontaneous colonic perforation because of rarity of this disease.

Case Report

A 63-year-old man was admitted to the emergency department of our hospital with severe abdominal pain that had started 8 hours prior to admission. Abdominal pain was associated with nausea and vomiting. Physical examination revealed diffuse abdominal tenderness and rebound. Bowel sounds were absent. Laboratory examination showed that white blood cell count was $17.500 \text{ cells/mm}^3$ (segment form, 82.8%).

Medical history of patient revealed that six years ago he was operated for transvers colon perforation and the patient undergone neoplasty plus an ascending colon ostomy. Colostomy was closed after 3 months from first operation.

An erect film of the abdomen showed free gas under right dome of the diaphragm. Computed tomography (CT) scans of the abdomen and pelvis with intravenous contrast were performed in the emergency department, which demonstrated free intraperitoneal air in the pelvis

immediately adjacent to the rectosigmoid colon, a small amount of free fluid in the pelvis (Figure 1).

So with the diagnosis of colonic perforation, 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. Whole length of colon explored during the operation and a 2*1 cm perforation was seen on antimesenteric border of rectosigmoid colon. Edge biopsy of the perforation was taken and primary closure of the perforation and proximal colostomy was done in two layers. The patient had an uneventful recovery and was discharged on the 7th postoperative day. The pathological report revealed congested submucosa and serosa with marked edema in the central region around the perforation. There was no evidence of inflammation. The patient underwent another surgical intervention to close the stoma after 3 months from the surgery. The patient was asymptomatic on follow up.

Discussion

Benjamin Brodie pointed out first spontaneous rupture in normal colon in 1827.²

The exact aetiology of spontaneous perforation of the colon is unclear. Stercoral ulcers of the colon, cortisone treatment, hypothyroidism, rectal prolapsus, constipation and psychiatric disorders have been suggested as causative factors.¹ Patients are usually overaged, inactive and more than half of the patients had constipation history.³ J. A. Berry classified spontaneous perforation into stercoral and idiopathic perforation in 1894. Stercoral perforation of colon occurs due to hard impacted stools perforating the rectosigmoid colon by ischemic necrosis.⁴ The Stercoral perforation is a round or an ovoid hole with necrotic and inflammatory edges. Idiopathic colonic perforation is linear, with broken ends of muscular layer regular, and histology is normal.⁵ The incidence of stercoral perforation of the colon has been reported to be 3.2% of all colonic perforation.⁶ Idiopathic perforation is much less frequently reported than stercoral perforation. The prognosis of idiopathic perforation is better than stercoral perforation because of the minimum degree of fecal contamination.⁷

Maurer have suggested the diagnostic criteria of Stercoral

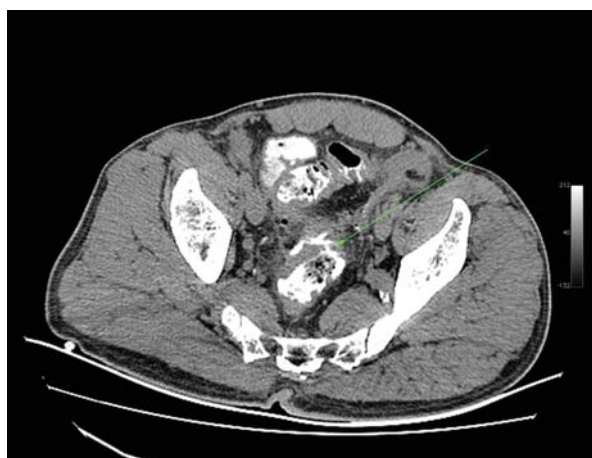


Figure 1. Abdominopelvic computed tomography findings: Extraluminal contrast material extravasation at rectosigmoid junction (arrow).

perforation in 2000. The criteria: a) presence of round or ovoid antimesenteric perforation areas with more than 1 cm in diameter, b) presence of fecal particles within the colon, or protruding through the perforation site or within the abdominal cavity, c) presence of pressure necrosis or ulcer with microscopic chronic inflammatory reaction around the perforation site, d) Tumors, obstruction, diverticulosis and external injury must be excluded.⁶ Idiopathic perforation occurs due to asymmetrical distribution of intraluminal pressure at the pelvirectal angle. Colonic wall is excessively dilated, thin and the perforation occurs in the absence of visible impacted faecal particles.⁸

Spontaneous perforation most frequently occurs at antimesenteric edge of the rectosigmoid junction, which is an area of physiological ischemia.^{6,9} Spontaneous perforation is more frequent in the overaged and the mean age of the patients is more than 60. The mortality rate is as high as 35% to 47%.^{9,10} Recurrent perforation is an extremely rare condition and recurrent idiopathic perforations in different parts of the large bowel has been reported only by case reports.¹¹

Only 10% of spontaneous colon perforations are diagnosed prior to surgery.⁸ Spontaneous perforation of the colon should be considered in the differential diagnosis of patients with acute peritonitis and free gas under diaphragm among the overaged patients with chronic constipation.^{12,13} Abdominal paracentesis is a valuable tool for the diagnosis.¹⁴ The most useful tool for diagnosis

of spontaneous perforation is abdominopelvic computerized tomography.¹⁵

The treatment for spontaneous perforation of the colon is based on the same principles as other perforations of the colon. The types of surgery depend on the time of onset, degree of peritonitis, physical condition of patient and lesion of the colon. The types of surgery are neoplasty, colostomy, neoplasty plus proximal colostomy and Hartmann surgery.¹⁶⁻¹⁸ Post-operative survival is over 60% and the morbidity and mortality rates depend on degree of peritoneal contamination.¹⁹ Early surgical resection of the affected part of the colon including all stercoral ulcers and intensive therapy for peritonitis leads to low mortality and high success in treatment.⁶ Serpell *et al* reported that the mortality and complication rates after Hartmann surgery were lower than in case of other operations because Hartmann surgery dissects the affected colon.¹⁰ Feculent ulcer may have more than one focus and, therefore, whole length of the colon should be explored during the operation.⁶

Conclusion

Spontaneous perforation of the colon should be considered in the differential diagnosis of patients with acute peritonitis and free gas under diaphragm among the overaged with chronic constipation. Early diagnosis and appropriate surgical treatments are keystone to improve the prognosis.

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