



A Rare Cause of Intestinal Obstruction in a Male Patient: Abdominal Cocoon, Case Report

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Abstract

Sclerosing encapsulating peritonitis (SEP) is a rare cause of intestinal obstruction which can be classified into a primary and a secondary form. The recommendation for mild cases is conservative treatment, surgical intervention reserved for the patients with severe symptoms of obstruction. The advised surgical approach is the excision of the membrane and adhesiolysis when there are no contraindications for this procedure. Here we present the case of a 58 year old male patient with SEP who was hospitalized for incomplete intestinal obstruction with a plan of conservative treatment, but had to be operated due to the situation progressing into total obstruction. In the present case, adhesiolysis and the excision of the dense and almost totally calcified fibrous capsule that tightly adhered to the viscera was not possible. Conservative treatment was continued after the operation and the intestinal obstruction resolved spontaneously in the postoperative period. Depending on the presented experience, we suggest aggressive resection and adhesiolysis may be abandoned in the absence of intestinal necrosis or perforation related to SEP, if considered to be too risky and the patient must be given another chance for spontaneous recovery.

Introduction

Sclerosing encapsulating peritonitis is a rare cause of intestinal obstruction [1]. First described by Foo et al. [2] in 1978 and named as “abdominal cocoon”, this syndrome is characterised by the encapsulation of the bowel by a fibrotic sac [1] and it has a primary (idiopathic) and a secondary form [3]. Idiopathic sclerosing encapsulating peritonitis is classically seen in adolescent female patients from tropical countries and it is the less frequently encountered form of this entity [1,4]. The secondary form, although mainly encountered as a feared complication of peritoneal dialysis, may also result from various other conditions that cause chronic peritoneal inflammation such as abdominal tuberculosis, cirrhotic ascites, peritoneal carcinomatosis, severe pancreatitis, and autoimmune diseases [5]. Here, we present the case of a 58 year old male patient who presented with intestinal obstruction caused by primary sclerosing encapsulating peritonitis.

Case Presentation

A 58 year old male patient presented to the emergency service of our hospital with a history of six-day colicky abdominal pain and distension that worsened in the last two days. Nausea and vomiting was accompanying these symptoms in the last day of the patient’s history. He also did not defecate in the last two days but he had gas discharge. Anamnesis revealed that the patient had several attacks of abdominal pain and distension in the last ten years and was hospitalised twice in this period, his symptoms resolving spontaneously without requiring surgical intervention. The patient also did not have a history of any other previous abdominal operations. He was not regularly using any medications. In physical examination, the patient was hemodynamically stable. Abdominal examination revealed distention, hyperactive bowel sounds and tenderness without rigidity or rebound tenderness. There were no specific alterations in the laboratory tests. Abdominal X-ray showed a few central air-fluid levels with no finding of free subdiaphragmatic air. On abdominal ultrasound, there were not any abnormal findings except multiple dilated intestinal segments.

The patient was hospitalised for conservative treatment with an initial diagnosis of partial intestinal obstruction. However, after medical treatment and nasogastric decompression for five days, the symptoms of the patient worsened. An abdominal computerised tomography revealed centralised intestinal loops encased by a partially calcified sac. These radiologic findings were

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Figure 1: Abdominal cocoon and possible internal herniation.

interpreted to be the signs of abdominal cocoon and possible internal herniation (Figure 1). Exploratory laparotomy was performed with these preoperative diagnoses. In the operation, it was seen that the abdominal viscera was totally enveloped by a dense and mostly calcified membrane forming a single cocoon. The operation was terminated after taking biopsies from the non-calcified sections of the membrane deciding on the impossibility of the resection of the membrane without causing major visceral injuries. The conservative treatment was continued in the postoperative period. Histopathology revealed dense fibrous tissue with massive collagen deposition.

Intestinal obstruction spontaneously resolved on the second postoperative day and the patient was discharged from the hospital six days after the operation. The patient was hospitalised once again one year later for another episode of intestinal obstruction; however, this attack also resolved spontaneously with conservative treatment.

The patient was symptom-free on his follow-up at the end of the second year. He gave his consent for his medical record to be used for scientific research.

Discussion

SEP was first documented in 1907 by Owtschinnikow and termed as the “peritonitis chronica fibrosa incapsulata” [1,6]. Then, in 1978 Foo et al. [2] reported the primary form of the disease in ten adolescent female patients naming the condition the abdominal cocoon. Today, although used as a general synonym of SEP in many reports, abdominal cocoon is stressed by some researchers to be the name describing the primary form of the disease [7].

The primary form of SEP, which is classically seen in young women from tropical countries, was thought to arise from retrograde menstruation [1]. However, this condition was also encountered in some children and male patients, contradicting this theory [8]. In fact, a recent review of the studies published from 2000 to 2014 revealed that almost two thirds of the patients diagnosed with this entity were males [7]. Therefore, the aetiology of this condition is still not clear. In the patient presented in this report, there was no apparent reason explaining the presence of SPE except a doubtful exposure to asbestos 25 years ago which could not be documented. Thus, we believe the patient to have the primary form of SPE.

Since it is rarely seen and the symptoms are nonspecific, the diagnosis of the situation is difficult in the preoperative period [9]. Contrast enhanced abdominal CT with multiplanar reconstructing images, should be the preferred imaging technique [3]. Using this method, it is possible to see the peritoneal thickening, signs of intestinal obstruction, clustering, and fixation of the intestinal loops [3]. In the present case, SEP was suspected preoperatively thanks to such preoperative radiologic evaluation. Unfortunately, the preoperative diagnosis of the entity did not have an influence on the operative success in the present case because of the dense and almost totally calcified fibrous capsule that tightly adhered to the large and small intestine it was encapsulating, preventing any adhesiolysis without intestinal injury. In this case we preferred not to take the risk of organ injury and contamination of the abdomen, which could lead to septic complications or the necessity to create an ostomy that could result in short bowel syndrome if it had to be created on a proximal segment. Also, intestinal resections are known to increase morbidity and mortality in SEP cases [7].

Terminating the operation led to a more favourable outcome in the present case, since the patient recovered with conservative treatment in the postoperative period with gas and faecal discharge followed by regression of abdominal distension and pain.

The recommendation for the cases of SEP with mild symptoms is conservative therapy, surgical intervention reserved for the patients with severe signs of intestinal obstruction [7]. In the present case, although the patient did not develop acute abdomen during the course of the disease, the incomplete obstruction progressed into a complete one. Thus, the decision for an exploratory laparotomy is justified in the present case. In the literature, the advised surgical approach is the excision of the membrane and adhesiolysis when there are no contraindications for this procedure [7]. Depending on the presented experience, we suggest aggressive resection and adhesiolysis may be abandoned in the absence of intestinal necrosis or perforation related to SEP, if considered to be too risky and the patient must be given another chance for spontaneous recovery.

References

1. Solak A, Solak I. Abdominal cocoon syndrome: preoperative diagnostic criteria, good clinical outcome with medical treatment and review of the literature. *Turk J Gastroenterol.* 2012; 23: 776-779.
2. Foo KT, Ng KC, Rauff A, Foong WC, Sinniah R. Unusual small intestinal obstruction in adolescent girls: the abdominal cocoon. *Br J Surg.* 1978; 65: 427-430.
3. Karan A, Özdemir M, Bostancı MT, Bostancı EB. Idiopathic abdominal cocoon syndrome: Preoperative diagnosis with computed tomography. *Turk J Gastroenterol.* 2015; 26: 193-194.
4. Oran E, Seyit H, Besleyici C, Ünsal A, Alış H. Encapsulating peritoneal

- sclerosis as a late complication of peritoneal dialysis. *Ann Med Surg (Lond)*. 2015; 4: 205-207.
5. Robert B, Hanes A. Abdominal cocoon, an uncommon cause of intestinal obstruction. *Presse Med*. 2015; 44: 352-354.
 6. Sohail MZ, Hasan S, Dala-Ali B, Ali S, Hashmi MA. Multiple abdominal cocoons: an unusual presentation of intestinal obstruction and a diagnostic dilemma. *Case Rep Surg*. 2015; 2015: 282368.
 7. Akbulut S. Accurate definition and management of idiopathic sclerosing encapsulating peritonitis. *World J Gastroenterol*. 2015; 21: 675-687.
 8. Shah MY, Gedam BS, Sonarkar R, Gopinath KS. Abdominal Cocoon: An Unusual Cause of Subacute Intestinal Obstruction. *Indian J Surg*. 2013; 75: S391-393.
 9. Uzunoglu Y, Altintoprak F, Yalkin O, Gunduz y, Çakmak G, Ozkan OV, et al. Rare etiology of mechanical intestinal obstruction: Abdominal cocoon syndrome. *World J Clin Cases*. 2014; 2: 728-731.