

## Letters to the Editor

### Intestinal obstruction due to sclerosing encapsulating peritonitis

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*Key words: Sclerosing encapsulating peritonitis, Intestinal obstruction, Adhesions.*

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Dear Editor,

Sclerosing encapsulating peritonitis (SEP) is a rare cause of intestinal obstruction in which the bowel is encased by a thick fibrocollagenous sac-like membrane. Most of the described cases involve a devastating complication in patients after longer periods on peritoneal dialysis.

#### Case report

A 63 year-old man went to the emergency department with abdominal cramp, vomiting and constipation. His medical history included liver cirrhosis, surgery for chronic pancreatitis and recurrent undiagnosed abdominal pain. The laboratory findings were unremarkable.

Simple abdominal radiography revealed dilatation and air-fluid levels in the small bowel loops and small amount of free intraperitoneal fluid. Abdomino-pelvic computerized tomography (CT) (Fig. 1) confirmed the presence of free intraperitoneal fluid, the dilated and clustered small loops surrounded by a thick capsule.

Due to a suspected intestinal obstruction, the patient underwent a laparotomy and a sclerosing encapsulating peritonitis was found.

The patient died a few weeks after surgery from multiorgan failure.

#### Discussion

Sclerosing encapsulating peritonitis (SEP), also known as “idiopathic encapsulating peritoneal sclerosis” or “abdominal cocoon” is a rare entity first described by Foo et al. (1) in 1978 as causing complete or partial mechanical obstruction of the small bowel loop. It can be idiopathic or mainly secondary to chronic ambulatory peritoneal dialysis with an occurrence in around 0.9-7.3% of patients. It has been associated with abdominal surgery, ventricle peritoneal shunts, retrograde menstruation, tuberculosis peritonitis, the intake of practolol, sarcoidosis, carcinoid tumors or patients with liver cirrhosis. In this latter case, it is likely that persistent intraabdominal infection will induce sclerosis and the formation of a fibrous capsule (2).

Clinically SEP presents features such as acute, subacute or chronic intestinal obstruction, vomiting, distention, colic abdominal pain and weight loss. An abdominal mass may also be present in up to 54% of patients.

CT is the technique of choice for diagnosing SEP, showing a characteristic pattern in all cases (3); a dilated small bowel in the middle of the abdomen and encasement by a thick membrane sac. Other radiologic findings include: fixation of intestinal loops, fluid collections, ascites, the thickening of bowel walls, peritoneal or mural calcification, adenopathy and peritoneal enhancement. These findings are usually associated with the advanced stages of the disease. It is less effective in demonstrating the changes in the early stages of the disease in the peritoneum. Huser et al. refers to the behavior of this entity in RM and demonstrated the possibility of detecting SEP by RM in earlier stages (4), but these findings are only discussed in one case.

The role of the  $^{18}\text{F}$ -fluorodeoxyglucose positron emission tomography has been studied in the inflammatory phase of the disease in patients on peritoneal dialysis and it has been concluded that PET-TC can help in making the diagnosis of SEP in the acute phase. However, in most cases it will be necessary to define the role of the RM and PET-TC on diagnosing the SEP.

Histologically, the membrane around the loops is formed by thickened fibrocollagenous tissue with or without foci of inflammation and in some cases with vascular proliferation (5). Micro-

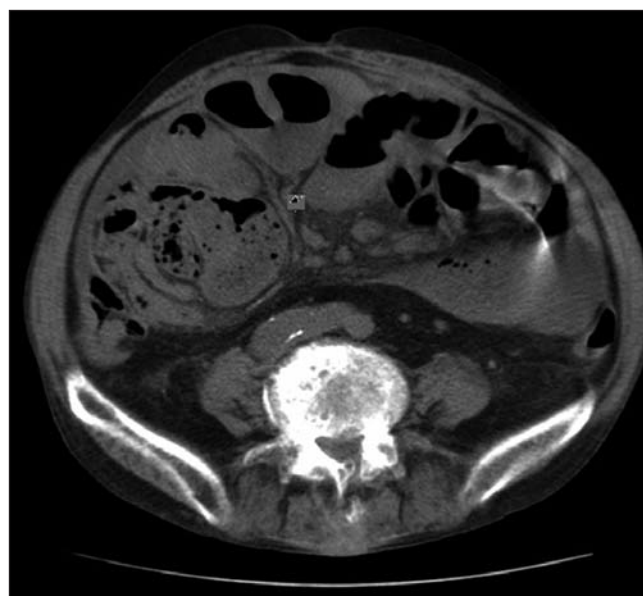


Fig. 1. Radiografía de abdomen (A) en bipedestación: dilatación de las asas de intestino delgado, con presencia de niveles hidroaéreos y pequeña cantidad de gas distal. TC abdominopélvica (B) sin contraste intravenoso por alergia al yodo: líquido en espacios parietocólicos y entre asas intestinales; dilatación de asas de intestino delgado agrupadas en hemiabdomen inferior derecho y rodeadas por cápsula fibrosa (flecha).

scopically, sclerosing peritonitis appears as a fibrosis submesothelial.

In the case of small-bowel mechanical obstruction and internal hernia must be considered in the differential diagnosis of SEP. Transmesenteric and paraduodenal are most common types.

Surgical treatment is recommended when irreversible intestinal obstruction sets in. It essentially involves stripping the encapsulating membrane and enterolysis, to avoid intestinal leakage and short-bowel syndrome, resection of the loop is recommended only if it is nonviable. However; morbidity and mortality is over 50% (6).

In the acute inflammatory phase of the SEP in patients on peritoneal dialysis, medical treatment with immunosuppressives (azathioprine, cyclosporine) with or without steroid may be effective. There are some cases treatments with tamoxifen. Nevertheless, most of these treatments refer to isolated clinical cases.

The best clinical knowledge (including the risk factors) of this entity and a high index of suspicion is crucial for a correct pre-operative diagnosis and appropriate management of intestinal obstruction in sclerosing encapsulating peritonitis, in patients with no history of peritoneal dialysis.

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## References

1. Foo KT, Ng KC, Rauff A, et al. Unusual small intestinal obstruction in adolescent girls: the abdominal cocoon. *Br J Surg* 1978;65:427-30.
2. Yamamoto S, Sato Y, Takaishi T, Kobayashi T, Hatakeyama K. Sclerosing encapsulating peritonitis in two patients with liver cirrhosis. *J Gastroenterol* 2004;39:172-5.
3. George C, Al-Zwae K, Fair S, Cast JE. Computed tomography appearances of sclerosing encapsulating peritonitis. *Clin Radiol* 2007;64:732-7.
4. Hüser N, Stangl M, Lutz J, Fend F, Kreymann B, Gaa J. Sclerosing encapsulating peritonitis: MRI diagnosis. *Eur Radiol* 2006;16:238-9.
5. Wei B, Wei H-B, Guo W-P, Zheng ZH, Huang Y, Hu BG, et al. Diagnosis and Treatment of abdominal cocoon: a report of 24 cases. *Am J Surg* 2009;198:348-53.
6. Lo WK, Kawanishi H. Encapsulating peritoneal sclerosis-medical and surgical treatment. *Perit Dial Int* 2009;29(Suppl. 2):S211-4.