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Post trauma abdominal cocoon

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ABSTRACT

Abdominal cocoon or sclerosing peritonitis refers to a rare cause of intestinal obstruction due to formation of a membrane encasing the bowel. We report a case of abdominal cocoon post blunt trauma abdomen. The patient presented with a history of subacute intestinal obstruction and a mobile abdomen lump. Abdominal cocoon was diagnosed on computed tomography. He underwent adhesiolysis with excision of membrane.

1. Introduction

Abdominal cocoon is a rare cause of intestinal obstruction due to encasement of whole or part of small intestine in a fibrocollagenous membrane. Though some cases may be idiopathic (classified as primary), in most cases, the condition usually follows an episode of subclinical peritonitis.[1,2] The reported causes include previous surgery, retrograde menstruation, peritoneal dialysis, tuberculosis, prolonged use of the β blocker practolol, liver cirrhosis, sarcoidosis, and systemic lupus erythematosus.[3] We report a case of intestinal obstruction due to abdominal cocoon post blunt trauma abdomen in a 41-year-old male.

2. Case report

A 41-year-old male presented with vomiting and loss of weight since 2 months. He had a past history of road traffic accident and a craniotomy 2 years prior to admission. His abdominal examination revealed a mobile, soft mass sized 10 cm × 10 cm in umbilical region. Contrast-enhanced computed tomography (CECT) of abdomen was carried out, which revealed conglomerate of small bowel loops in centre of abdomen, encased by a thick membrane forming a sac. There was marked dilatation of stomach, duodenum and duodenojejunal junction beyond which jejunal loops were extending into the sac (Fig. 1).

Patient underwent exploratory laparotomy. Intraoperative findings showed complete encasement of small bowel from duodenojejunal junction till ileoceacal junction in a thick membrane, with pockets of straw coloured fluid between the loops. The large intestine was covered up by the membrane (Fig. 2). The membrane was excised piecemeal and adhesiolysis of small bowel was done (Fig. 3).

Postoperative course was uneventful. Histological examination of the membrane showed fibrous tissue with focal inflammatory cells.

3. Discussion

Abdominal cocoon is also referred to as sclerosing peritonitis (SP).[4] This rare cause of intestinal obstruction is most commonly found in young girls and is hypothesized to be due to retrograde menstruation.[1,5] The common etiological factor in all of these conditions is subclinical peritonitis.[6] In case of our patient, the cause appears to be an unnoticed injury following trauma. The presentation ranges from acute intestinal obstruction requiring emergency surgical intervention to a more chronic history of recurrent subacute intestinal obstruction. Abdominal examination may reveal a soft mobile mass.[2] Definitive preoperative diagnosis can be made by computed tomography (CT) showing a thick smooth membrane encapsulating the bowel, completely or partially. However, it may be difficult to identify a thin flimsy membrane[5] on CT. Diagnosis with barium meal and follow up studies has been reported, which is described as cauliflower appearance due to clustering of small bowel. Similar appearance may also be found on abdominal

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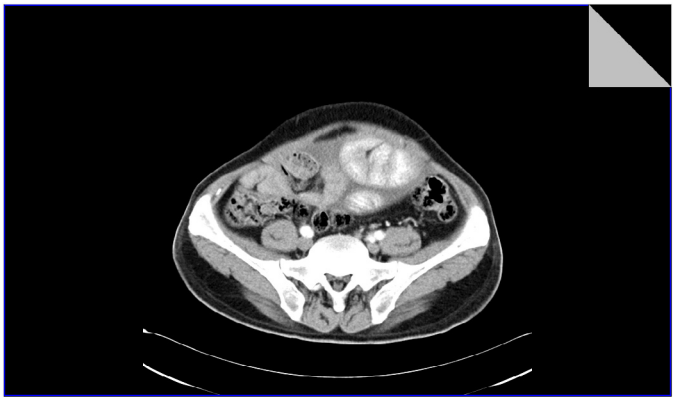

Fig. 1. CECT showing small bowel encased in sac.

Fig. 2. Intraoperative view.

X-ray. The condition needs to be distinguished from peritoneal encapulsation,[6,7] which is a congenital condition encapsulating the whole of small intestine in a thin sac. This is usually an incidental finding not causing any symptoms. The diagnosis was traditionally made intraoperatively, with findings of a membranous sac encapsulating the intestines causing obstruction. Intraoperative finding include a membranous sac which is usually thick and leathery. The membrane may be calcified.[8] There are flimsy adhesions of the bowel with sac and other loops of bowel. Pockets of serous fluid may be found between the loops of intestines in long standing cases.

There are some reported cases of medical management with corticosteroids and tamoxifen.[4] Definitive treatment is surgical.[6] In uncomplicated cases, adhesiolysis with excision of membrane is all that is necessary; resection may be required in case of perforated or unhealthy bowel. Long term prognosis is good and recurrence has not been reported.

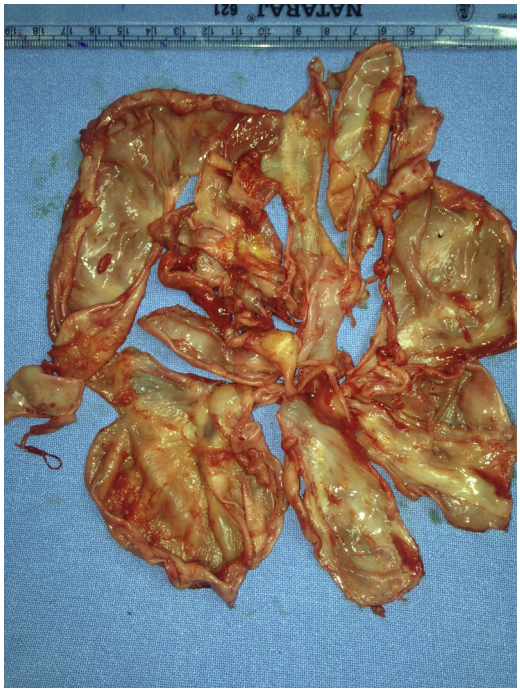

Fig. 3. Excised cocoon membrane.

Conflict of interest

None.

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Ethical approval

Informed written consent obtained.

Author contributions

Study conception and design: Rudra Prasad Doley; acquisition of data: Supreet Kaur; Analysis and interpretation of data: Rudra Prasad Doley; Drafting of manuscript: Supreet Kaur; Critical revision: Mohnish Chabbra, Jaidev Wig.

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