



ABDOMINAL COCOON: A RARE CAUSE OF SUB ACUTE INTESTINAL OBSTRUCTION.

General Surgery

Dr K M Garg Professor & Head, Dept of General Surgery JNU IMSRC, Jaipur.

Dr Manish Kumar Gupta Professor & Head, Dept of General Surgery JNU IMSRC, Jaipur. - Corresponding author

ABSTRACT

Abdominal cocoon is characterized by small bowel encapsulation by a fibro-collagenous membrane. It is a rare cause of chronic abdomen. A 18 year female presented with intermittent pain abdomen of one year duration. Intra-operatively, the entire small bowel was found to be encapsulated in a dense fibrous sac. The peritoneal sac was excised, followed by lysis of the inter-loop adhesions. Post operative recovery was unremarkable. Most abdominal cocoon patients present with features of recurrent acute or chronic small bowel obstruction secondary to kinking and/or compression of the intestines within the constricting cocoon. The diagnosis requires a high index of suspicion because of non specific clinical picture. Peritoneal sac excision and adhesiolysis is the treatment and the outcome is usually satisfactory.

KEYWORDS:

Sclerosing encapsulating peritonitis, subacute intestinal obstruction, abdominal cocoon

Introduction:

Abdominal cocoon is also known as sclerosing peritonitis or sclerosing encapsulating peritonitis. It is characterized by total or partial encapsulation of abdominal viscera by a fibrous membrane. It has been reported mainly in adolescent women and the majority of the cases are of unknown etiology. Preoperative diagnosis is difficult and is usually established during laparotomy¹.

Herein we present a case of subacute intestinal obstruction caused by sclerosing encapsulating peritonitis.

Case report:

18 year old female patient presented to surgical out-patient department at JNU Hospital, Jaipur with history of intermittent pain abdomen for last one year duration mainly in epigastric and right iliac region of abdomen. Per abdominal examination was not much contributory. USG abdomen revealed nothing significant, hence a clinical diagnosis of subacute appendicitis was made and laparoscopic appendicectomy was planned. After creating pneumo-peritoneum and introducing laparoscope through first umbilical cannula, whole gut was found encased in fibrous membrane, so a decision for conversion to open surgery was made. At laparotomy whole of the small intestine was covered with a thick fibrous sac which was densely adherent (photo 1). The dense fibrous layer was removed meticulously with both sharp and blunt dissection and small intestine adhesions separated. Post operative period of patient was unremarkable. Histopathology reported as cocoon wall section showed fibro-collagenous tissue with chronic inflammatory infiltrate. Patient was symptom free when last seen at three months follow up.

Discussion:

Abdominal cocoon may be classified into primary or idiopathic and secondary forms². Primary abdominal cocoon occurs mainly in young women from tropical and subtropical zones. Although retrograde menstruation with or without viral infection of the fallopian tubes has been suggested as a possible cause^{2,3}, it does not account for the occurrence of abdominal cocoon in males. Secondary abdominal cocoon is apparently associated with predisposing factors, such as recurrent peritonitis, intake of intraperitoneal irritants as antibiotics and beta blockers, chronic ambulatory peritoneal dialysis (CAPD), sarcoidosis, familial Mediterranean fever, carcinoid syndrome, exposure to asbestos, and autoimmune disease^{2,3}.

Clinical features are non specific and may be misleading. They may include recurrent abdominal pain, vomiting, anorexia, weight loss, and episodes of subacute bowel obstruction.

X-ray abdomen may show small bowel loops enclosed in cocoon of peritoneum causing proximal bowel dilatation or dilated bowel loop lying in a concertina fashion giving cauliflower sign⁴. CT scan remains gold standard in diagnosis of abdominal cocoon. It demonstrates thickened membrane encasing small bowel loops, thickened bowel

loops, tethering or matting of bowel or peritoneal calcification⁵.

A high index of suspicion is required for its diagnosis⁶. Most of cases are not diagnosed preoperatively despite in advancement of imaging and are found at laparotomy. Bo et al. reported that out of 24 cases of abdominal cocoon only four cases were diagnosed by radiological imaging while 20 cases were diagnosed at laparotomy⁷.

Treatment, as in the present case, consists of gentle handling of the intestine, resection of entire enveloping membranes and meticulous release of inter-loop adhesions. Bowel resection is unnecessary unless a nonviable segment is found.



Photo 1 : showing cocooning of whole of small intestine .

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