International Surgery Journal
Padhy AP et al. Int Surg J. 2019 Dec;6(12):4580-4582
http://www.ijsurgery.com
pISSN 2349-3305 | eISSN 2349-2902

DOI: http://dx.doi.org/10.18203/2349-2902.isj20195438

Case Report

Sclerosing encapsulating peritonitis: a rare case presenting as intestinal obstruction

Aditya Prasad Padhy*, Swetamayee Dash

Department of General Surgery, Kalinga Institute of Medical Sciences, Bhubaneswar, Odisha, India

Received: 16 August 2019
Revised: 04 November 2019
Accepted: 06 November 2019

***Correspondence:**
Dr. Aditya Prasad Padhy,
E-mail: docadityapadhy@gmail.com

ABSTRACT

Abdominal cocoon or sclerosing encapsulating peritonitis is a rare condition of unknown/ multifactorial etiology in which intestinal obstruction result from encasement of variable length of bowel by dense fibro collagenous membrane. A young adolescent girl reported with features of small bowel obstruction for more than one year. CT scan suggested features of internal obstruction. On exploration, she was found to have all viscous densely covered with a thick white gelatinous like membrane. The membrane was gently peeled off from the bowel. The patient recovered well and was discharged on an oral diet. Preoperative diagnosis of sclerosing encapsulating peritonitis is difficult and incidentally it is discovered on laparotomy. CECT is helpful in preoperative diagnosis. Main stay of treatment for this is surgery. Simple removal of the membrane after lysis of the adhesions produces optimal outcome. When the intestine is nonviable, bowel resection should be done. A high index of suspicion and appropriate radiology can prevent 'surprises' on laparotomy and unnecessary bowel resection. Simple removal of the membrane gives a good outcome.

Keywords: Abdominal cocoon, White gelatinous covering, Young adolescent girls

INTRODUCTION

Abdominal cocoon or sclerosing encapsulating peritonitis is a rare condition of unknown or multifactorial etiology in which intestinal obstruction result from encasement of variable length of bowel by dense fibro collagenous membrane. Most common in adolescent girls.[1] Common causes like idiopathic, peritoneal dialysis related, malignancy (NET, dermoids), drugs like β blockers, ergot, generalized peritonitis.[2,3] According to BoWei classification, its divided into 3 types, 3 types according to extent of encasing membrane: Type I membrane encapsulates small intestine partially.[4] Type II entire intestine been encapsulated by membrane. Type III entire small intestine and other organs (e.g., appendix, cecum, ascending colon ovaries) encapsulated by membrane. Pre-operatively it may not be diagnosed correctly due to non-specific findings of CT and MRI.

CASE REPORT

A 15 year old girl reported with pain abdomen, intermittent vomiting, and dyspepsia for more than one year with findings of lower abdominal distension. History of normal regular menstruation. On examination 10×8 cm firm, mobile mass palpable, occupying RIF, umbilical and hypogastric region. Contrast enhanced computed tomography (CECT) abdomen suggested features of intestinal obstruction (Figure 1).[5] On exploration, she was found to have all viscous densely covered with a thick white gelatinous like membrane (Figures 2-4). The membrane was gently peeled off from the bowel (Figure

5) and sent for histopathological study, which came out to be cocoon fibro-collagenous cyst wall with proliferated capillaries and focal solidifications. The patient recovered well and followed up for 6 months.

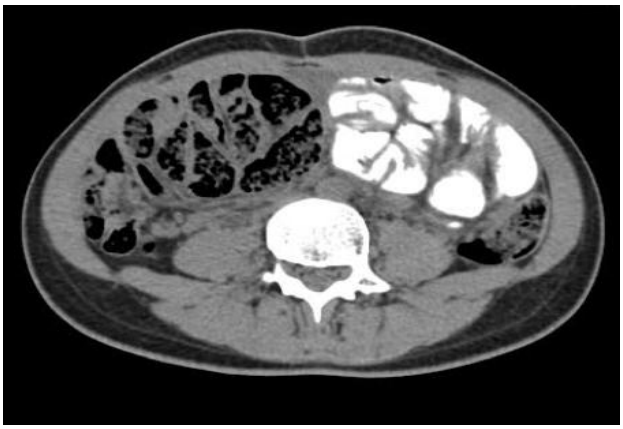

Figure 1: CECT abdomen of two different well defined pouches containing mild dilated bowel loops, extending from epigastric region to hypogastrium; bowel contents of upper pouch filled with oral contrast and lower pouch filled with faecal material.

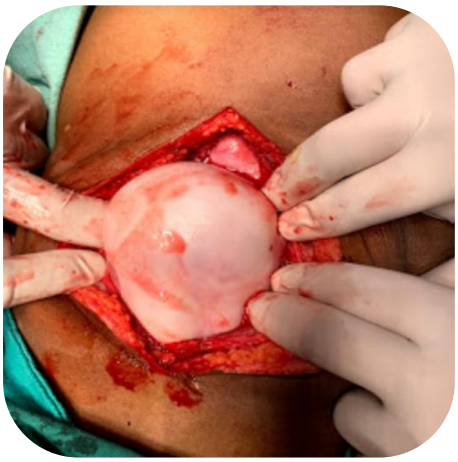

Figure 2: Mass coming out just after abdominal incision.

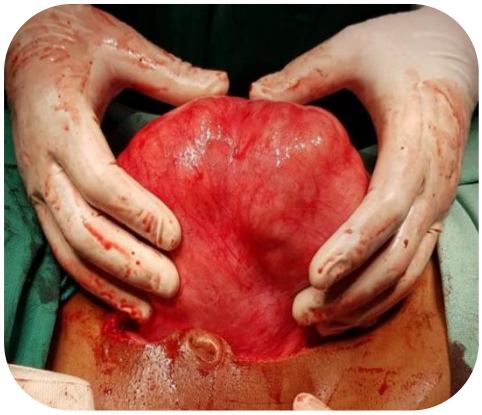

Figure 3: The bowel with cocoon.

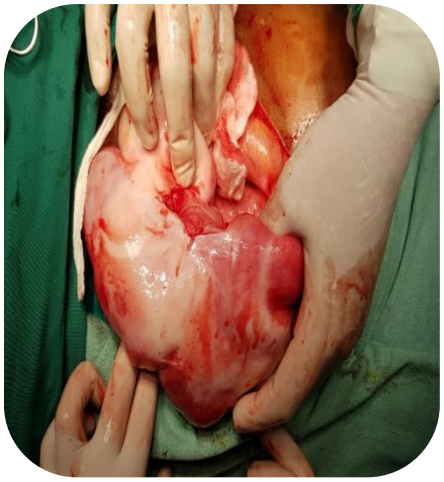

Figure 4: Gently separation of the cocoon covering from bowel.

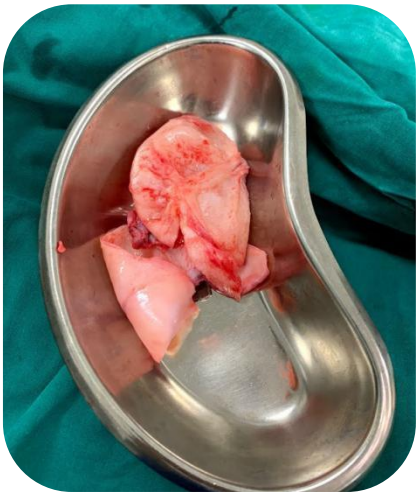

Figure 5: The white gelatenous covering after separating from bowel.

DISCUSSION

Preoperative diagnosis of sclerosing encapsulating peritonitis is difficult and incidentally it is discovered on laparotomy.[6] CECT is helpful in preoperative diagnosis.[7] Surgery is the main stay of treatment. Simple removal of the membrane after lysis of the adhesions produces optimal outcome. When the intestine is nonviable, bowel resection should be done. Prognosis of abdominal cocoon is excellent. Differential diagnosis are congenital peritoneal encapsulation, peritonitis carcinomatosa, pseudomyxoma peritoneal mesothelioma, tuberculous peritonitis.[8,9]

CONCLUSION

Abdominal cocoon is rare and idiopathic etiology. Imaging findings are not always conclusive where as high index of suspicion with appropriate radiology help in preventing ‘surprises’ on laparotomy and unnecessary

bowel resection. Simple removal of cocoon establishes very good outcome.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Allam H, Al Yahri O, Mathew S. The enigma of primary and secondary encapsulating peritoneal sclerosis. BMC Surg. 2016;16:81.
2. Anantha RV, Salvadori MI, Hussein MH, Merritt N. Abdominal cocoon syndrome caused by *Mycobacterium bovis* from consumption of unpasteurised cow's milk. Lancet Infect Dis. 2015;15:1498.
3. Fei X, Yang HR, Yu PF, Sheng HB, Gu GL. Idiopathic abdominal cocoon syndrome with unilateral abdominal cryptorchidism and greater omentum hypoplasia in a young case of small bowel obstruction. World J Gastroenterol. 2016;22:4958-62.
4. Wei B, Wei HB, Guo WP, 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.
5. Al-Abassi AA, Emad M. Abdominal cocoon. An unusual cause of intestinal obstruction. Saudi Med J. 2004;25(10):1482-5.
6. Sieck JO, Cowgill R, Larkworthy W. Peritoneal encapsulation and abdominal cocoon. Case reports and a review of the literature. Gastroenterology. 1983;84(6):1597-601.
7. Gupta S, Shirahatti RG, Anand J. CT findings in abdominal cocoon. Am J Roentgenol. 2004;183:1658-60.
8. Li N, Zhu W, Li Y, Gong J, Gu L, Li M, et al. Surgical treatment and perioperative management of idiopathic abdominal cocoon: single-center review of 65 cases. World J Surg. 2014;38:1860-7.
9. Tannoury JN, Abboud BN. Idiopathic sclerosing encapsulating peritonitis: abdominal cocoon. World J Gastroenterol. 2012;18:1999-2004.

Cite this article as: Padhy AP, Dash S. Sclerosing encapsulating peritonitis: a rare case presenting as intestinal obstruction. Int Surg J 2019;6:4580-2.