

ABDOMINAL COCOON- A RARE CAUSE OF INTESTINAL OBSTRUCTION

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Abstract

Background: Sclerosing encapsulating peritonitis is a rare clinical entity of unclear etiology that is characterized by thick fibrocollagenous membrane that partially or completely encases the small intestine or colon leading to acute, subacute or chronic episodes of intestinal obstruction. **Case presentation:** A 62-year old male patient who was a diagnosed case of abdominal Koch's presented with chronic persistent nausea and vomiting, associated with anorexia, constipation. **Investigations:** The imaging findings were suggestive of intestinal obstruction. **Conclusion:** Preoperative detection can be challenging when the pathognomonic signs are absent. Excision of the encapsulating membrane and adhesiolysis is the definitive treatment for Abdominal cocoon.

INTRODUCTION

Sclerosing encapsulating peritonitis(SEP) is a rare cause of small bowel obstruction. It is characterized by complete or partial encapsulation of the small bowel by a thick fibrous membrane that resembles a sac. It was first observed in 1907 by Ovchinnikov and was termed as 'chronica fibrosa incapsulata'.^[1] In 1978, this condition was described to also occur secondarily to peritoneal dialysis.^[2] Computed tomography (CT), in combination with clinical presentation, has been reported to be the most sensitive and specific pre-operative modality of diagnosis.^[3]

CASE REPORT

A 62-year-old male presented to the emergency department with chronic persistent nausea and vomiting, associated with anorexia, constipation and weight loss. He had given history of similar attacks over the last one year which resolved spontaneously. He was a diagnosed case of Abdominal Koch's and was undergoing treatment for the same since five months. He had no significant past surgical history. His vitals were within normal limits. Abdominal examination revealed central abdominal distension, tender central abdominal mass, guarding.

He was sent to the Radiology department and the following imaging features were seen.

X-ray abdomen showed multiple air-fluid levels with dilated small bowel loops suggestive of intestinal obstruction [Figure 1].

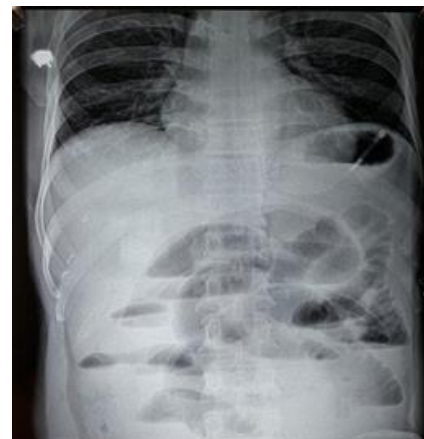


Figure 1: X-ray abdomen in erect posture depicting air-fluid levels suggestive of intestinal obstruction.

Ultrasonography revealed Mild ascites and thickened small bowel loops which were encased by a membrane in the center of the abdomen in a concertina-like fashion [Figure 2]. The bowel loops

showed normal vascularity on colour Doppler imaging.



Figure 2: Ultrasound depicting grouped small intestine loops (yellow arrow) with mural thickening

The patient underwent a contrast enhanced abdominal computed tomography (CT) which revealed dilated small intestines with multiple air-fluid levels that were encapsulated by thick irregularly shaped enhancing membranous tissues [Figure 3] [Figure 4].

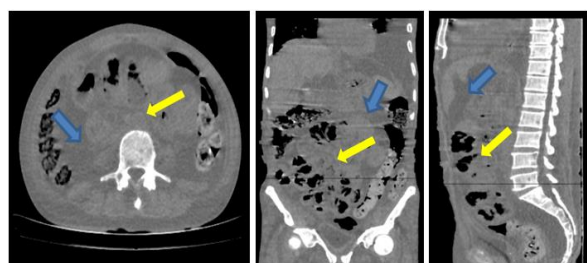


Figure 3: Plain computed tomography (CT) in axial (A), coronal (B) and sagittal (C) sections depicting encapsulated ascites (blue arrow) within the thickened layers of the peritoneum. Small bowel loops are displaced centrally (yellow arrow).

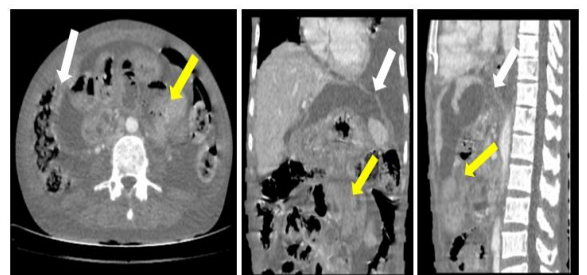


Figure 4: Contrast enhanced computed tomography (CT) in axial (A), coronal (B) and sagittal (C) sections depicting central abdominal conglomerate of dilated small intestine loops with moderately thickened walls (yellow arrow) and “encapsulated” by a thickened enhancing peritoneal membrane (white arrow).

The patient underwent exploratory laparotomy due to small bowel obstruction. During the surgery, thick fibrous membranes encapsulating the proximal jejunum & distal ileum was found thereby confirming SEP [Figure 5]. All the adhesions and cocoon membranes were released and were sent for histopathological examination. The patient was symptomatically better post the surgery.

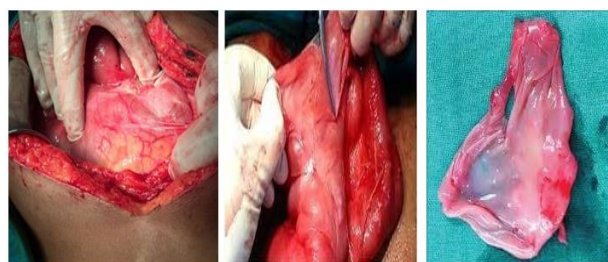


Figure 5: (A),(B) Intraoperative photographs of small intestine encapsulated by a thick fibrous membrane. (C) The fibrous membrane which was adherent to the bowel.

DISCUSSION

Sclerosing encapsulating peritonitis, also known as abdominal cocoon syndrome, peritonitis chronica fibrosa incapsulata, is a relatively rare condition known to cause abdominal pain and either partial or complete Small bowel obstruction. It can be classified as either primary (idiopathic) or secondary, commonly caused due to chronic ambulatory peritoneal dialysis (CAPD), TB, sarcoidosis, liver transplantation, cirrhosis, viral peritonitis, prior abdominal surgery, and VP shunting.^[4] The mainstay of surgical management is adhesiolysis and partial or complete excision of the peritoneal membrane depending on the extent of the disease.^[5]

CONCLUSION

SEP is a benign bemusing condition with a variety of proposed causes. This condition is often progressive and can be fatal. Best outcomes have been reported for patients in whom early surgery has been performed. Thus, early diagnosis is of prime importance. A high degree of clinical suspicion and a familiarity with the multimodality radiologic findings enable early diagnosis, which can markedly improve patient outcome.

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