

Sclerosing Encapsulating Peritonitis (SEP)

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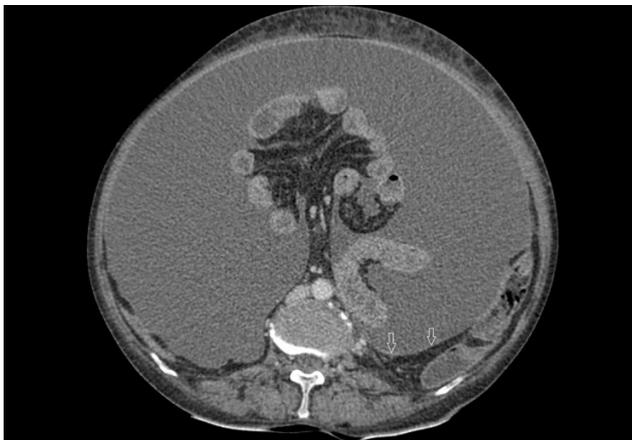
Keywords: Abdominal Cocoon, Computed Tomography, GIT

A 64 year old female presented with a 2-week history of postprandial nausea and vomiting. Patient had past history of the tuberculosis 5 years back for which she was successfully treated with anti-tuberculous drugs. Patient was afebrile with no previous history suggestive of any surgery.

Ascitis with mildly hyperactive bowel sound were present on abdominal examination. Rectal temperature was 36.5°C (normal), blood pressure was 116/82 mm Hg (normal), and heart rate was 82 beats per minute (normal). Laboratory investigations were positive for the raised ESR (Erythrocyte Sedimentation Rate), leucocytosis and microcytic hypochromic anaemia. No significant abnormality revealed in plain supine abdominal radiograph. Fibrotic changes with scattered calcific foci in the right upper zone were present in chest X-ray suggestive of old tuberculous lesions. Abdominal ultrasound demonstrated cluster of small bowel loops displaced in the center of abdomen with mild inter loop ascites. Few enlarged lymph nodes were seen in the small bowel mesentery. Contrast enhanced Computed Tomography (CECT) of abdomen after intravenous administration of 100 ml of the iohexol (300 mg of iodine per milliliter, Omnipaque) revealed

encapsulated loculated fluid collection (ascitis) with enhancing thickened non calcified peritoneum [Table/Fig-1]. There was tethering of the small bowel loops with displacement in the center of the abdomen [Table/Fig-2]. Diagnosis of Sclerosing encapsulating peritonitis (SEP) secondary to the past tuberculosis was postulated on the basis of imaging findings. Patient was treated conservatively by the corticosteroid and tamoxifen with nutritional support, but she did not improve. Exploratory laparotomy was performed, which demonstrate that the small bowel loops were wrapped around the thick peritoneal pseudocapsule with multiple adhesions. Enterolysis was performed. Dense fibrosis with chronic inflammatory cells was seen in the histopathological examination of the pseudocapsule.

Spontaneous encapsulating peritonitis occurs due to the total or partial encasement of the small bowel loops within a thick fibrocollageneous membrane. It is also termed as an abdominal cocoon. There are various etiologies behind SEP. It can be idiopathic, or secondary to the chronic ambulatory peritoneal dialysis (CAPD) in chronic renal failure patient or patient treated with the practolol [1]. Abdominal diseases like



[Table/Fig-1]: Transverse CT image of abdomen after intravenous administration of 100 ml of the iohexol (300 mg of iodine per milliliter, Omnipaque) revealed intestinal small bowel loops displaced in the center of the abdomen & encapsulated in thick enhancing fibrous capsule (open white arrow) with ascitis



[Table/Fig-2]: Transverse CT image of abdomen after intravenous administration of 100 ml of the iohexol revealed intestinal small bowel loops displaced in the center of the abdomen & encapsulated in thick enhancing fibrous capsule with ascitis

tuberculosis, sarcoidosis, gastrointestinal malignancy and ovarian thecomas are the other rare causative factors. Plain radiograph is often nonspecific that can show air-fluid levels. CECT demonstrates dilated small bowel loops clumped at the center of the abdomen encased within a thick enhancing fibrocollageneous membrane [2]. Signs of obstruction, ascites, localized fluid collections, peritoneal or mural calcification, and reactive adenopathy may be seen. There are three stages of the SEP: inflammatory, encapsulating and ileus stage. In the inflammatory stage, there is progressive inflammation with increased WBC count, CRP (C- Reactive Protein) and ascitis. Steroid and immunosuppressive drugs are used in inflammatory stage. In the encapsulating stage, there is peritoneal thickening with encapsulation. Aggressive nutritional supportive therapy is required. And in the ileus stage loss of inflammation with ileus symptoms for which enterolysis is needed. Basic surgical technique consists of ablation of the

capsule and intestinal adhesions. Recurrence after surgery seen in some patients. SEP is not a fatal complication, outcome after surgery is good.

LEARNING POINTS

- Tuberculosis is one of the etiologies of SEP, to be kept in mind especially in endemic region.
- Plain radiograph is non-specific for the diagnosis of the SEP.
- CECT scan is diagnostic that demonstrates dilated centrally displaced small bowel loops encased within a thick enhancing fibrocollageneous membrane.

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FINANCIAL OR OTHER COMPETING INTERESTS:

None.

Date of Publishing: Jul 01, 2015