Abstract:
Abdominal cocoon is a rare condition characterized by small bowel encapsulation within a fibrous membrane with intestinal obstruction. The following presentation is that of a 48 yr old male presenting to the emergency department with acute intestinal obstruction. To diagnose with certainty it requires a high index of suspicion because the clinical picture and imaging studies are non specific.

Keyword: Abdominal cocoon, Peritonitis, Intestinal obstruction

Case Report:
A 48 year old male presented with colicky abdominal pain for one day duration, there was also presence of vomiting, abdominal distension. There were no episodes of previous abdominal pain or hospitalization for any abdominal illness. He was a know tuberculous patient on irregular Anti Tubercular drug treatment, defaulted after taking 3 months of taking drugs, there was no other significant medical illness of the patient. On admission the pulse rate was 112 bpm, BP 100/60 mm of Hg and febrile. He was dehydrated. Examination of abdomen revealed distension, no guarding or rigidity, There was diffuse abdominal tenderness present all over the abdomen. Bowel sounds were sluggish.

USG abdomen was done which revealed loculated fluid collection with distended bowel loops, Xray abdomen erect revealed presence of multiple air fluid levels with dilated small bowel loops.

A provisional diagnosis of acute intestinal obstruction (malignancy) was made and the patient was taken up for exploratory laparotomy. Abdomen was opened by a midline incision, the entire small bowel was plastered to each other with dense adhesions to abdominal wall. These adhesions were carefully released taking care not to injure the small bowel. Peritoneal biopsy and mesenteric nodes
were taken and sent for Histopathological examination. Thorough lavage was given. He had a prolonged but an uneventful post operative period. Histopathology revealed caseating epitheloid granulomas. This combined with history of pulmonary tuberculosis and patient being a defaulter on ATT drugs confined the etiology to Tuberculosis as the cause.

INITIAL LOOK AFTER ADHESIOLYSIS

Discussion:
Abdominal cocoon syndrome is a rare entity characterized by partial or complete encasement of small bowel by a thick ring of fibrous tissue and adhesions causing clustering of bowel. Occasionally the large bowel, stomach or other abdominal organs may be involved. The etiology is grouped to primary or secondary. Primary is rare and has mainly been described in young girls from tropical regions. Retrograde menstruation causing peritoneal irritation has been speculated as a probable cause in these cases. The secondary causes include sarcoidosis, Systemic Lupus Erythematosus, In dwelling abdominal catheters, Orthotopic liver transplantation, tuberculosis. These predispose to peritoneal irritation and inflammation which as a final effect leads to peritoneal fibroneogenesis.

Clinically it presents with recurrent episodes of acute or subacute small bowel obstruction, weight loss, nausea, anorexia and at times a palpable abdominal mass. Most cases are diagnosed incidentally at laparotomy as in the case presented although a preoperative diagnosis is purported feasible by a combination of barium follow through (concertina pattern or cauliflower sign and delayed transit of contrast medium) and computed tomography of abdomen (small bowel loops congregated to the center of abdomen encased by a soft tissue density mantle). However preoperative diagnosis requires a high index of clinical suspicion. Surgery (membrane dissection and extensive adhesiolysis) is the treatment of choice and there is usually no need for bowel resection. Resection is indicated only if the bowel is not viable. An excellent long term prognosis is most of times guaranteed.

Conclusion:
In the above case presented an intraoperative diagnosis of abdominal cocoon was made. Pre-Operative findings were inconclusive in his current admission. Although final surgical management would not have been modified if results from imaging investigations taken at the earliest possible
time a pre-operative diagnosis could have been made possible. A high index of suspicion may be generated by cases presenting with recurrent intestinal obstruction combined with radiological investigations. Clinicians must rigorously pursue a preoperative diagnosis as it may prevent a surprise laparotomy and unnecessary procedures for the patient such as bowel resection.

References:
