immunocompentent child and with normal outcome after appropriate antibiotics and minimally invasive aspiration. Various risk factors such as poor nutritional status and hygiene, lack of access to primary medical care, immune deficiency, and injectable drug abuse are associated increase chance of developing deep seated abscess. But it is perplexing to see a rare gram negative organism causing a multifocal abscess in liver in an otherwise normal child, which would indicate a change in epidemiology of these infectious agents. The management of these lesions would not greatly defer from the stand protocols, where empirical broad spectrum antibiotics followed by specific agents based on the sensitivity pattern of the cultured organism and continuous catheter drainage to evacuate the pus.[4] In *C. koseri* infection, aminoglycosides, fluoroquinolones, third or second generation cephalosporins and carbapenems are considered effective for the duration of 4 to 6 weeks, however there are reports of antibiotics resistance.[4] Monotherapy is better avoided in case of deep seated serious infections such as liver abscess as it would lead to inadequate clearance and development of resistance.

KP SRIKANTH
JAGADEESH MENON V
SUBHAMOY DAS
SADHNA B LAL
PALLAB RAY
BR THAPA

Division of Pediatric Gastroenterology, Department of Gastroenterology, Department of Medical Microbiology, PGIMER, Chandigarh.

Correspondence: KP Srikanth
Email: kpkantha@gmail.com

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Idiopathic sclerosing encapsulating peritonitis in a child

Sclerosing encapsulating peritonitis (SEP) is a chronic inflammatory process in which the bowel loops are encased by a dense fibrocollagenous membrane.[1-5] Patients with no factors explaining the condition are considered to have primary SEP, while patients with SEP that has developed due to various surgical or medical causes are considered to have secondary form.[2,3] It is a rare entity and found generally in young adolescent girls in tropical and subtropical countries. We present a case of a 7 year old boy who had classical cocoon formation.

Case Report

A seven year boy presented with complaints of pain in abdomen since 7 days and obstipation since 3 days. Radiological investigations showed multiple air fluid levels on erect X-ray abdomen (**Figure 1**) and prominent dilated loops on Ultrasonogram. On exploration it was found that the whole of the small and large bowel were encased in a thick capsule like covering forming a cocoon (**Figure 2**). Mesentric thickening and lymphadenopathy were also seen. Near total excision of the cocoon and lymph node biopsy was done. The contained bowel loops were traced and found to be healthy. Post operative period was uneventful. Histopathology showed non granulomatous inflammation and was negative for AFB. Patient is doing well on follow up.

Discussion

SEP was first defined nearly 100 years ago when it was termed "peritonitis chronic fibrosa incapsulata".[1,2] It was classified as per the underlying etiological causes into primary and secondary forms. The primary idiopathic form was termed "Abdominal cocoon Syndrome" by Foo in 1978.[2] SEP is commonly seen in adolescent females from tropical and subtropical region. All but one study[1] found it to be more common in females. Cause and pathogenesis of the condition have not been elucidated. The plausible hypothesis is a recurrent low grade or subclinical peritonitis causing sclerosis and membrane formation. Some other hypothesis are retrograde menstruation with superimposed viral infection, retrograde peritonitis through fallopian tubes however this cannot explain the occurrence of this condition in males, children and premenopausal females.[2,3] Secondary SEP on the other hand is more common and have proven causes like chronic inflammatory disease most commonly tuberculosis,[1] others being sarcoidosis, endometriosis, SLE. Peritoneal dialysis catheter is found to be the most common cause of secondary SEP.[1,2] Other causes are venrticulo-peritoneal shunts, beta adrenergic blocking agents, abdominal trauma or surgery, GI malignancy.[5] Diagnosis is generally in line of obstruction with a high clinical index of suspicion. Clinical history is especially important for secondary causes. Radiological investigation includes plain X-ray, barium studies, ultrasonography and abdominal CT. X-rays and ultrasongram are generally non specific.[1,2] Barium study shows accumulated bowel loops in centre of abdomen with a prolonged transit time.This appearance is termed as a cauliflower or accordion sign. However these studies cannot be done in acute obstructed cases. Contrast enhanced CT (CECT) of abdomen is a more helpful imaging modality. It shows a conglomerated mass of intestine in centre with contrast free capsule in periphery.[1,2]

The closest differential diagnoses of idiopathic SEP are internal herniation of bowel and Primary encapsulation.[1,5] Internal herniation mimics the clinical and radiological features. Paraduodenal and trans-mesentric are the most common types.[4] Peritoneal encapsulation is a congenital condition in which a part or whole of the

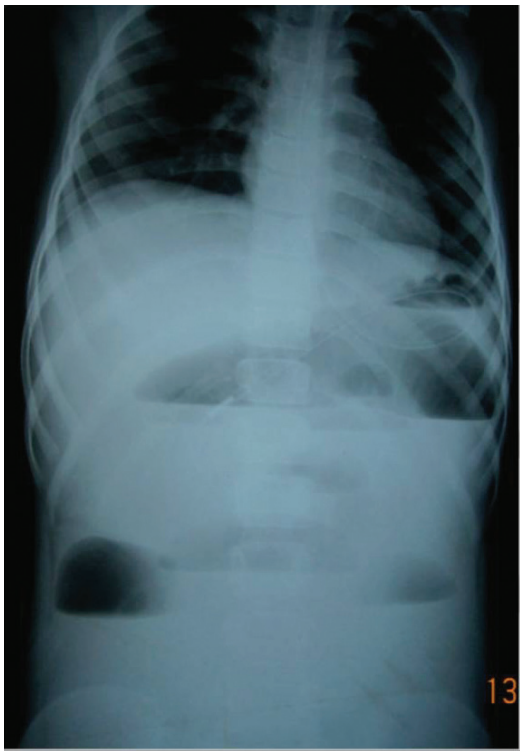

Figure 1: Plain Xray abdomen erect showing obstructed pattern.

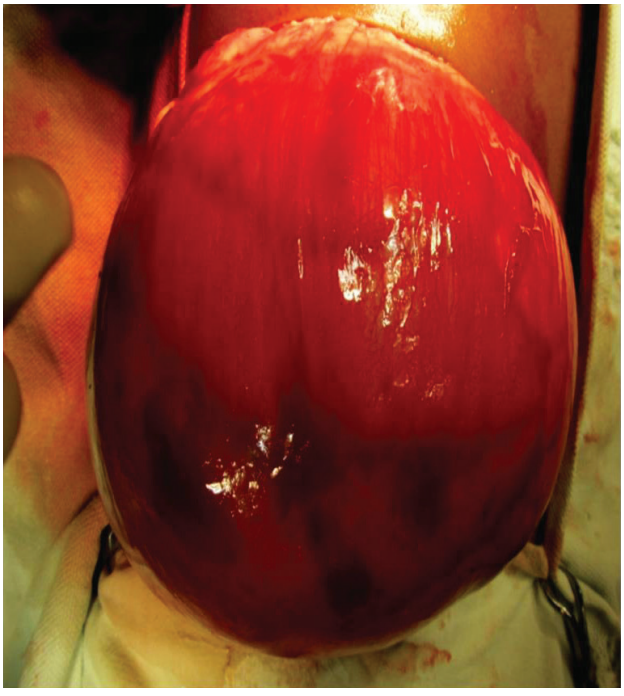

Figure 2: Intraoperative finding of abdominal coccon.

bowel is encased by an accessory peritoneal membrane. Usually asymptomatic it may cause bowel obstruction in few. The differentiation lies in histopathology, which shows a normal peritoneal membrane rather than a thick fibro-collagenous tissue.[1,2]

There is no evidence based consensus regarding the optimal management. Conservative treatment may possible in sub-acute cases with naso-gastric compression and nutitional support. Other drugs used are tamoxifen, colchicine, steroids, azathioprine, mycophenolate mofetil.[1,2] Surgical treatment with complete or near total excision of capsule+/- adhesiolysis remains the treatment of choice in acute cases and cases not responding to conservative trials. Open or laparoscopic approach both are feasible and depends on the surgeon's choice and expertise for the case.[3] The risk of recurrence is quite low when the membrane can excised completely.[1,2,3] Administration of antiadhesive substances or antiinflammotory agents in between the loops is debatable.[1] Post operative complications include early post operative small bowel obstruction, enterocutaneous fistulas and recurrence.[1,3,4]

JYOTI M BOTHRA
CHARU SHARMA
GURSEV S SANDLAS
HEMANSHI S SHAH

Department of Pediatric Surgery, BYL Nair Hospital, Mumbai.

Correspondence: Hemanshi Shah
Email: hemanshisshah@gmail.com

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