IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 13, Issue 12 Ver. I (Dec. 2014), PP 104-107
www.iosrjournals.org

Caecal volvulus a rare presentation of acute intestinal obstruction in a 22 year old female:

Shshank jain, Aakansha K and Deepak H

Abstract: *Acute intestinal obstruction due to cecal volvulus forms an uncommon cause when there is axial twist of the cecum, ascending colon and terminal ileum around their mesenteric pedicles. There are many etiologies and predisposing factors for cecal volvulus, but the exact etiology is most likely to be multifactorial in presence of mobile cecum. It is the rarity and non specific presentation that makes the preoperative diagnosis to be rarely achieved in most cases.*

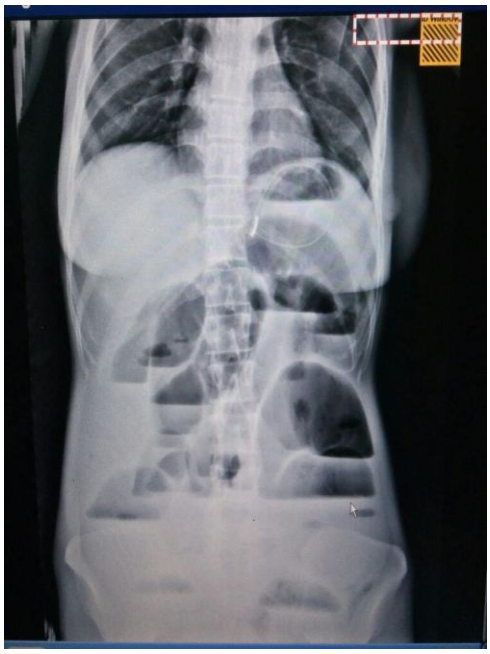
I. Introduction:

Acute intestinal obstruction has many causes, but cecal volvulus among colonic obstructions forms a meagre 1 % of it (1).The incidence of colonic volvulus is 2.65 per 100000 annually with female preponderance in cecal volvulus. Cecal volvulus accounts for only one fourth of all cases of colonic volvulus. According to a postmortem study by Wolfer and et al. presence of cecum with sufficient mobility is found to be 11.2% in adults.(2) Given a mobile cecum certain factors like acute medical illness, pregnancy, distal colon obstruction and a previous laparotomy plays a significant role. (3)

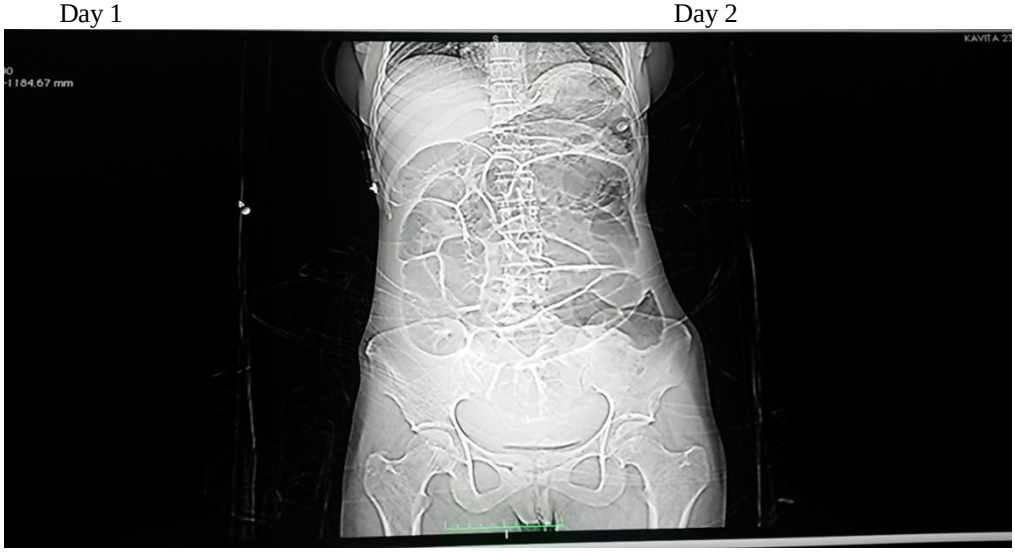
II. Case report:

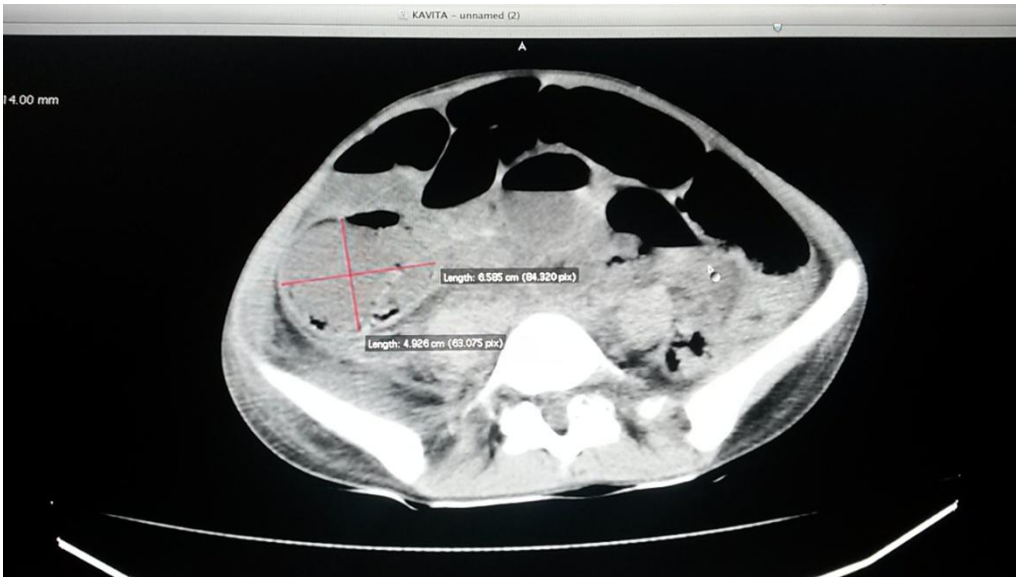
A 22 yr old married female presented to casualty with complains of abdominal distension, vomiting, constipation since two days and obstipation since one day .Patient was persistently tachycardic, afebrile with rest of vitals within normal range .On per abdominal palpation patient's abdomen was severely distended with mild abdominal pain on deep palpation , no guarding, rigidity, lump, organomegaly and scar marks seen with sluggish peristalsis present on auscultation .On per rectal examination the rectum was loaded with soft fecal matter. Patient had history of full term normal delivery one year back with no complication. Her past history had no other similar complains or relevant medical , surgical or obstetric history. On presentation patient's blood profile showed anemia and normal white blood cell count. Radiological findings on ultrasonography showed minimal free fluid in pelvis and sluggish peristalsis with multiple dilated bowel loops and on erect X-ray abdomen showed dilated ascending, descending and small bowel loops of ileum and jejunum with air and features of impacted stool present near the junction of descending and sigmoid colon. Patient was managed conservatively for two days as her distension was reduced with enema and flatus tube evacuation of faecal matter .On Day 2 patient continued to be in tachycardia and febrile up to 100 degree with little relief of symptoms and CT scan showing faecal impaction in ascending colon and descending colon with mild ischemic changes seen in cecum. On day 3 , patient developed marked tenderness in pelvis with increase tachycardia and white cell counts with X-ray erect abdomen showing multiple air fluid levels .Patient was taken for emergency exploration which revealed complete rotation of cecum ,ascending colon and ileum around its mesentery with gangrenous caecum, dilated small bowel loops and pelvic abscess .Incidental finding of a long redundant sigmoid , with a free ascending colon . Patient underwent resection of cecum and a terminal ileostomy with mucus fistula made from ascending colon and a primary ileo-colic anastomosis postponed for a further date after patient is recuperated. Patient is currently doing well and awaiting her next surgery.

Day 1

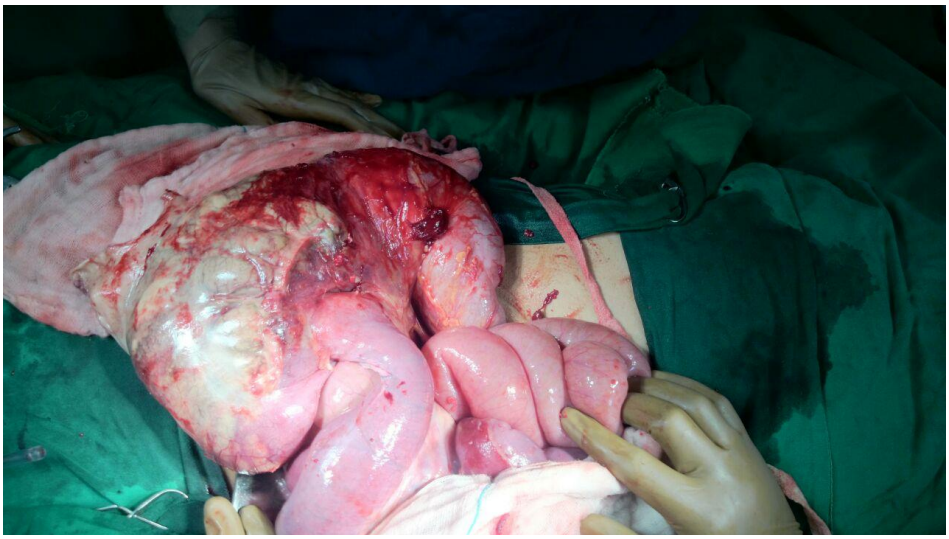


Day 2





CT SCAN Scout film and figure showing impacted stool in ascending colon.



Caecal volvulus with gangrene

III. Discussion:

Tumours form a majority of cases of large bowel obstruction throughout the world, with diverticular diseases and volvulus forming the rest. Volvulus commonly affects the sigmoid, caecum and transverse colon in the decreasing order of frequency with caecal volvulus accounting for 1% of total cases of large bowel obstruction(4). A prerequisite for caecal volvulus is free mobility of the caecum. This can be due to incomplete embryologic rotation of the bowel or improper developmental fusion of the mesentery of the caecum and ascending colon with the posterior parietal peritoneum. Wolfer and et al. showed in their post-mortem studies that sufficient mobility of caecum is present as an anatomical variant in 11.2% of adults.(2) It's also found that caecal volvulus has a multifactorial etiology with components like acute medical illness, pregnancy, distal colon obstruction and a previous laparotomy playing a major role alongside free mobility of caecum in causing caecal volvulus.

Patients with caecal volvulus tend to present with non specific abdominal symptoms. The most common symptoms are abdominal pain, nausea and vomiting, obstipation and diarrhoea .The duration of acute symptoms range from 12 hours to 10 days. There is a female preponderance when it comes to caecal volvulus. According to studies physical examination and leucocyte counts correlate poorly with presence or absence of gangrenous bowel. Therefore caecal volvulus requires prompt operative intervention to avoid delay in treatment of patients who might have clinically unsuspected gangrenous caecum.(5)

Radiographic studies assume an important role in diagnosis. Plain abdominal films show a markedly dilated caecum displaced to practically any part of the abdomen, but frequently to left hypochondrium. Many a time small bowel dilatation is also seen which tends to mislead as small bowel obstruction. Barium enema has been the historical imaging modility of choice for caecal volvulus but due to potential of contrast extravasation and the time requirement in completing the procedure, it's not favoured and is currently not used in critically ill patients. Computed tomography (CT) scan of the abdomen and pelvis is the preferred imaging modality of choice.

All operative interventions depend upon the presence of viable bowel or not. In critically ill patients or if perforation or generalised peritonitis is present consideration should be given to a temporary ileostomy and a distal mucus fistula with re-anastomosis at a later time. Other operative intervention in presence of viable bowel is cecopexy, detorsion and primary ileocolic anastomosis. Endoscopic approach in terms of decompression in management is limited .The success rate is estimated to be about 30% and recurrence rate post colonoscopy is unknown. An endoscopic approach may delay care and may put the patient at an increased risk of perforation.(6)

Hence definitive therapy for caecal volvulus is surgery.

IV. Conclusion

In summary, Caecal volvulus deserves urgent attention and should be kept in mind whenever there is caecal dilatation evident in radiographic findings and use of CT scan will clinch the diagnosis and hence save the patient at risk from undergoing morbid procedures and the unnecessary delay associated with other investigating modalities .Surgery still forms the main stay treatment for patients with caecal volvulus.(6)

References:

[1]. Peterson H. Volvulus of the cecum. Ann Surg. 1964;166:294.
[2]. Wolfer. J. A , Beaton, L. E and Anson BJ. Volvulus of the Cecum: Anatomical Factors in its Etiology:Report of a Case. SurgGynecol Obs. 1942;74:882.
[3]. Grodsinsky, C. andPonka JL. Volvulus of the Colon. Dis colon rectum. 1977;20:314.
[4]. Ruiz-Tovar J, Calero García P, Morales Castiñeiras V M, E M. Caecal volvulus: presentation of 18 cases and review of literature. Cir Esp. 2009;85:110–3.
[5]. Lau KC, Miller BJ, Schache DJ CJ. A study of large-bowel volvulus in urban Australia. Can J Surg. 2006;49:203–7.
[6]. Mulas C, Bruna M, García-Armengol J RJ (2010). Management of colonic volvulus. Experience in 75 patients. Rev Esp Enferm Dig. 2010;102:239–48.