July 2009; Volume 3(1)

Case Report

Uncommon cause (fecolith or enterolith) of small intestinal obstruction in the adult

G Chowdhury[1], AS Kumar[2], A Rahman[3], BC Das[4]

Abstract

Intestinal obstruction due to fecolith is a rare cause of small bowel obstruction. A 40 years old lady presented with the features of intestinal obstruction of 6 days duration. She had H/O laparatomy for DU perforation and hysterectomy. Clinical examination and investigations pointed to intestinal obstruction because of intestinal adhesions from previous surgeries. Conservative treatment did not give relief to the patient. Diagnostic laparoscopy revealed ascites and moderate adhesion A lump with hard consistency was detected in the terminal ileum. A diagnosis of lymphoma was made and hemicolectomy was planned. After mobilizing the caecum and part of ascending colon laparoscopically, small transverse incision was made in RIF. Whole mass and caecum was delivered through the wound. The mass in the ileum was felt moving proximally on traction. The mass was pushed proximally and enterotomy was made to take out the lump. It was a 6 x 4 x 2 cm fecolith [fig-3]. There was no other abnormality or cause of intestinal obstruction except mild adhesion at the terminal ileum.

Introduction: Fecolith is usually a cause of obstructive appendicitis or distal colonic obstruction (fecal impaction) [1]. Diverticulum is also the other site for formation of fecolith or enterolith [2]. Some times fecolith is formed in caecum or other parts of the colon but it is usually associated with congenital deformity of gut and diverticular disease [3]. Fecolith causing intestinal obstruction in ileum is rare.

Case report

A 40 Years old lady admitted in Apollo Hospitals Dhaka from another city hospital, with the complaints of vomiting, abdominal pain, and absolute constipation for last 6 days. On admission she was mildly dehydrated, ill looking, having average built and N-G tube was in situ. Her abdomen was mildly distended, soft and with diffuse mild tenderness, no palpable lump. Bowel sound was present, Digital Rectal Examination (DRE) revealed empty rectum. She had scar marks of two previous operations (DU perforation, Hysterectomy). Plain X- ray abdomen in erect position and CT scan showed gaseous distension of small bowel with multiple fluid levels [fig-1]. USG showed dilated bowel loops containing fluids. Serum electrolytes were within normal limit. She was treated conservatively for three days. Even after three days she did not show any sign of improvement. Bowel sound became sluggish, distension of the abdomen gradually increased. LFT showed hypoalbuminaemia and hepatitis-B antigen positive. Diagnostic laparoscopy was done. Moderate ascities, mild adhesion in the right iliac region with a mass which was of hard sensation was found in the terminal ileum 30 cm proximal to the I-C valve with few lymph nodes. Bowel wall at the site was erythematous and moderately oedematous and hard feeling. Initially it was thought to be small bowel lymphoma and lap assisted right hemicolectomy was planned. Caecum and ascending colon was mobilized laparoscopically and a limited transverse incision was made in right iliac fossa. Caecum with the mass and part of ileum was taken out through the incision. Surprisingly the hard mass in the terminal ileum was felt moving proximally. The mass was milked out proximally through enterotomy. It was a 6 x 2 x3 cm size fecolith[fig-3]. The small gut, patency of the I-C valve, caecum, ascending colon were checked and found normal. Abdomen was closed in layers.

Figure -1: X-ray in erect posture Showing multiple air-fluid level

1. Senior Registrar, Department of Paediatric Surgery, Apollo Hospitals Dhaka, 2. AS Kumar, 3. Senior Consultant & Co-ordinator, Department of General and Laparoscopic Surgery, Apollo Hospitals Dhaka, 4. Specialist, Department of General and Laparoscopic Surgery, Apollo Hospitals Dhaka

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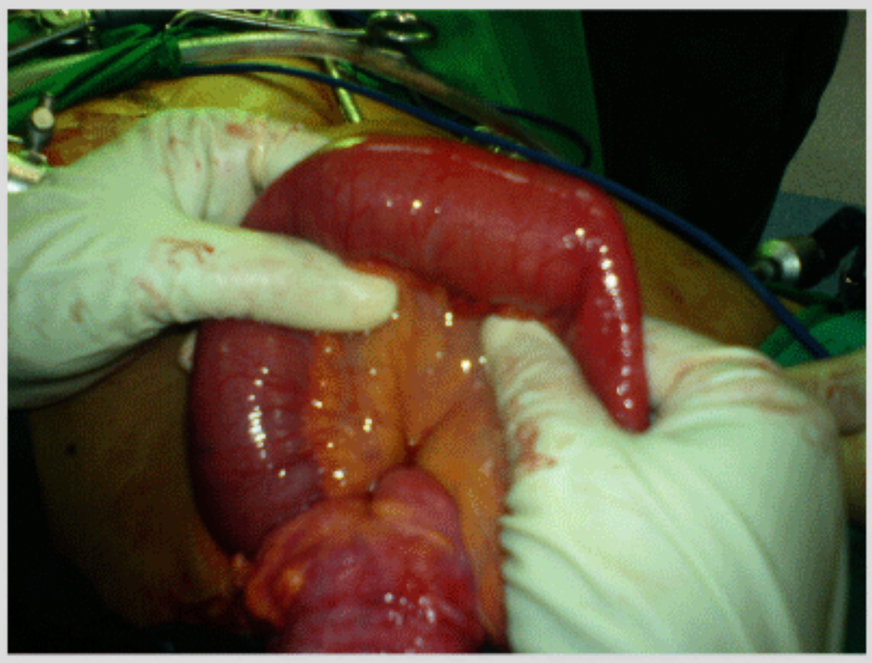

Figure- 2: Fecolith in the terminal ileum

Figure-3: Fecolith through Enterotomy

Discussion: Small bowel obstruction due to post operative band and adhesion is not uncommon. Hernia, bands congenital or acquired, tuberculosis, lymphoma, inflammatory bowel disease are the other common causes of small bowel obstruction. Gall stones and worm bolus, Bezoars are intraluminal causes of intestinal obstruction [4]. But fecolith or enterolith is very uncommon cause of small bowel obstruction in apparently normal gut with mild adhesion.

Fecolith is the concretion of fecal matter usually formed in the appendices causing obstructive appendicitis and in diverticulum. Enterolith is composed of inspissated fecal material, calcium phosphates, magnesium, bacteria, epithelial debris and un-conjugated choleric acid but little or no cholesterol[2].

Bile constituents are sometimes presents if it is formed near to the duodenum but gall stone usually contains cholesterol and bile pigment. Sometimes they are formed around foreign body. Enteroliths formed in Meckel's diverticulum gives radio-opaque shadow in rt iliac fossa in less then 50 % cases. They are usually faceted with a smooth surface and stay in place for a long time with out being expelled or can be released into the intestine causing intestinal obstruction[5]. It may also form in the colonic diverticulum, caecum with congenital septum[3]. It is postulated that dyskinesia and stasis of intestinal content for instances of diverticulum or in the bowel proximal to stricture leads to bacterial overgrowth causing decomposition of bile salt allowing precipitation and concretion, causing enterolith formation [6]. The maximum size reported in the literature is near 6 cm and number is up to 1400 proximal to a postoperative stricture. Such a big isolated fecolith (6X3X2 cm) forming approximately 30 cm proximal to the I-C valve is very unusual. Moreover, in that part of bowel, stool is usually in liquid form and passed easily through I-C valve. This fecolith was not radio-opaque. Both X-ray and CT scan did not reveal it. No anatomical abnormality was found in the gut which may have produced stasis except mild adhesion. The other conditions that can produce a similar clinical presentation of small bowel obstruction are a food bolus and bezoars (false enterolith)[8].

Surgical treatment of enterolith obstruction has to be planned if conservative treatment with decompression of gastrointestinal tract, rehydration, correction of electrolytes imbalances fails. Laparotomy and milking of enteroliths distally into the colon, crushing, or enterotomy and stone extraction are adequete in most cases [7],[9],[10]. USG and CT scan are useful in diagnosis of jejunal enterolith obstruction [11], [12]. If the diagnosis is made preoperatively, an effort can be made to milk and crush the enterolith laparoscopically. In few cases milking distally is not possible[7]. In this case we extracted it through enterotomy which was curative. We decided to report this case as such obstructions are rare and apparently there is no reference in the literature.

Conclusuion: After searching world literature that is available in MEDLINE and PUBMED on the relevant topics small bowel obstruction secondary to a enteroliths formed in the diverticulum is reported in 34 cases. But enterolith in the small intestine with mild adhesion is not reported. Fecolith may not be radio-opaque and may be missed in radiography and imaging, so sometimes only diagnosed at laparotomy and the treatment was curative and effective. In small intestinal obstruction who had previous surgery, enterolith has to be considered as a cause of obstruction.

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