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CASE REPORT

FECOLITH CAUSING SMALL INTESTINAL OBSTRUCTION IN YOUNG ADULT: A CASE REPORT AND DISCUSSION

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ABSTRACT

Intestinal obstruction due to fecolith is a rare cause of small bowel obstruction. A 20 years old adult male presented with the features of intestinal obstruction of seven days duration. Clinical examination and radiological investigations suggests the features of small bowel obstruction. Patient underwent exploratory laparotomy and a lump with hard consistency was found in distal jejunum, and enterotomy was made to take out the lump. It was fecolith of size 4×3×2 cm (Fig 3).

Key words:

Small bowel obstruction,
Fecolith, Enterolith.

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INTRODUCTION

A fecolith also called fecalith, coprolith, fecaloma or enterolith is characterized by a hardened large mass of feces of varying size frequently localized in sigmoid colon and rectum. It is commonly seen in childhood, elderly patients and following spinal cord injury (Read *et al.*, 1995). Fecolith is usually a cause of obstructive appendicitis or distal colonic obstruction (Torigian *et al.*, 2001). Diverticulum is also the other site for formation of fecolith (Maglinte and Herlinger 1989). Since few cases have been reported as fecolith causing small bowel obstruction, but there is no clear information regarding its incidence. There are some diseases like hirschsprung's disease, psychiatric disorders, chaga's diseases, inflammatory and neoplastic disease and chronic constipation in which there incidences are high (Campbell and Robinson, 1973). We report a case of 20 years young adult who presented with features of small bowel obstruction, exploratory laparotomy was done and fecolith of size 4×3×2 cm was found in distal jejunum which was removed through enterotomy.

Case Report

A 20 year young adult presented with seven days of progressive abdominal distension, vomiting, pain abdomen and not passing flatus and feces. On admission; he was dehydrated with average built and nasogastric tube was in situ.

Physical examination showed a pulse rate of 110 beats/minute, blood pressure 100/64mm hg and temperature of 99·F. There was poor skin turgor and dry mucous membrane. The abdomen was distended and tympanic to percussion. Bowel sounds were increased in frequency, volume, and pitch. There was no stool in the rectum, but the rectal examination was otherwise normal. Plain x-ray abdomen in erect position showed gaseous distension of small bowel with multiple air fluid levels (Fig.1). USG whole abdomen showed dilated bowel loops. Liver function test, serum lipase, amylase, blood electrolytes and serum creatinine were all within normal limits; the only abnormal diagnostic test were white cell count 16000. The patient was thought to have small bowel obstruction and planned for exploratory laparotomy after taking proper surgical written informed consent. The abdomen was opened with mid line incision and obvious distension of the small bowel was immediately revealed. The gut was very distended down to a point where a stone like body was felt in distal jejunum. Beyond this point the intestine was collapsed. The affected loop having been isolated between towels, a clamp was applied above and below, and a fecolith measuring 4×3×2 cm size was removed through a longitudinal incision (Fig.2), and jejunum was sewn up transversely in two layers. The gall bladder was examined and found to be normal. Ileum, caecum, ascending colon were checked and found normal. The post-operative period was unremarkable and discharged on 14th post-operative day. Pathologic examination confirmed large masses to be fecal impaction with no calcification.

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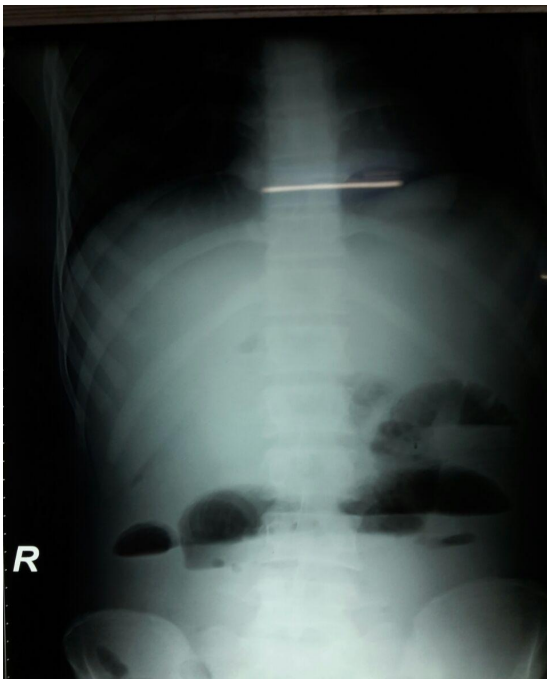


Fig. 1. X-Ray abdomen erect showing dilated loop of small bowel

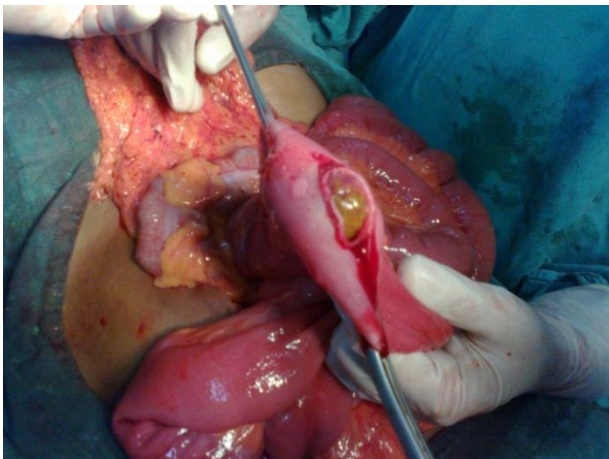


Fig. 2. showing Fecolith through Enterotomy



Fig.3. showing fecolith with apparently normal surrounding intestine

DISCUSSION

We are reporting the first case of proximal small bowel obstruction due to fecolith which was not associated with Meckel's or non Meckel's diverticula. Fecolith is very uncommon cause of small bowel obstruction in apparently normal intestine. Fecolith (enterolith) occurs particularly in areas of stasis, e.g- diverticula, strictures from previous trauma, Chron's disease and blind loops (Narayanswamy and Walsh, 2007).

Foreign bodies are found throughout the gastrointestinal tract. These may be either exogenous, having been ingested, or endogenous if formed in the gastrointestinal tract. Fecolith are formed from indigested and usually indigestible bowel contents. They are formed from the prolonged accumulation and compaction of bowel contents in areas of poor gastrointestinal flow such as the appendix, a Meckel's diverticulum or the chronically constipated bowel. A great variety of fruit and vegetable have caused intestinal obstruction- orange pith, grape-fruit, mango fibers, a pickled onion. Dried fruit has accounted for many of the reported cases. Nearly always the bolus becomes impacted in the lower ileum, because the improperly masticated dried fruit swells as it passes along the alimentary canal. Bolus obstruction is particularly liable to occur after partial gastrectomy. In literature, size of the fecolith has been a prediction of symptoms, with lesions larger than 3 cm in adults causing intussusceptions, pain, constipation and bowel obstruction (Shatila and Ackerman 1997). Fecal impaction with intestinal obstruction can cause gangrene of the intestine, perforation or necrosis (Teasdale and Mortensen, 1983). Abdominal x-rays, ultrasonography and CT scans are the preferred radiological modalities for diagnosing intestinal obstruction caused by fecal impaction. Barium enema and colonoscopy are additional measures that may aid in diagnosis but have a limited value in the presence of acute abdomen. Appropriate operative treatment may be life saving (Lohlun *et al.*, 2000). Timely laparotomy is required. An attempt should be made gently to squeeze the bolus onward into the Cecum, and there to break it up by kneading, should the bolus be impacted so firmly that this maneuver proves impracticable, after isolating the coil with abdominal packs enterotomy is performed (Fig.3). We decided to report this case because fecolith causing small bowel obstruction in apparently normal gut is very rare possibility; most likely due to impaired gastro-intestinal motility. Consent has been taken from patient for publication of case for academic purpose.

Conclusion

A case of small bowel obstruction due to fecolith should be primarily tried to manage by medical treatment; in case of failure, surgical interventions should be planned and after discharge proper diet, regular toilet training and follow-up further increases the success rate.

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