Research Paper

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Primary Enterolithiasis A Rare Cause of Recurrent Subacute Intestinal obstruction: A Case Report

MEDICAL SCIENCE

KEYWORDS : Enterolithiasis, Hypomotility, Intestinal obstruction, exploratory laparotomy

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ABSTRACT

*Primary enterolithiasis is a rare entity, occurring in association with pathological conditions that lead to hypomotility and stasis. It may be asymptomatic or may present with sub-acute or acute intestinal obstruction, but specific radiological diagnosis of primary enterolithiasis is uncommon. Definitive treatment of enterolithiasis with small intestinal obstruction is essentially surgical. We report a case of 57 year old diabetic female with SAIO for 2 years with H/o cholecystectomy 3 years back. The X – ray KUB showed a calcified shadow measuring 51*41 mm and the CECT revealed a hyperdense rounded lesion in right iliac fossa. Exploratory laparotomy was done and a single approx. 5 cm round stone was found 10 cm proximal to ICJ.*

INTRODUCTION

Small bowel obstruction due to stone impaction is very rare. True enteroliths are formed by precipitation and deposition of substances from the alimentary chime, while false enteroliths are mainly fecoliths and formed by foreign bodies that clump together with intestinal contents [1].Primary enteroliths, rare entity, arise in areas of intestinal stasis in the setting of diverticular disease[4], surgical enteroanastomoses, blind pouches, and intestinal stenosis or strictures seen in the infectious or inflammatory bowel diseases. According to Ruiz et al., a genetic substrate predisposing to this uncommon entity is possible[2] .Mortality rate of primary enterolithiasis may reach 3%

CASE REPORT

A 57 yr. female presented with sub-acute intestinal obstruction for 2 years. Patient had history of frequent hospitalizations, was treated conservatively and discharged many a times but the symptoms were not completely relieved. There was a history of cholecystectomy 3 years back and patient was a known case of type 2 diabetes mellitus and hypertension for 20 years and was on oral hypoglycaemic agents and antihypertensive. At the time of admission, patient presented with moderate distension of the abdomen with exaggerated bowel sounds and tenderness. The X-ray KUB region showed a calcified shadow measuring approximately 51*41 mm, was seen in small bowel in pelvis [Figure 1]. The ultrasonographic findings suggested a calcified mass approx. 44 mm in greatest dimension in right lower abdomen. CECT abdomen was done which revealed a moderate sized hyper dense rounded lesion in right iliac fossa in relation to distal ileal loop with mild dilatation of proximal loop with no post contrast scan enhancement. The patient was then planned for exploratory laparotomy. At exploration there was no bowel pathology, stricture or diverticula. Instead the mechanical obstruction was due to a large hard enterolith (5 cm in diameter) situated approx. 10 cm from ileo-caecal junction which was extracted by enterostomy and sent for biochemical analysis [Figure 2]. The patient was continuously monitored for next 24 hrs. Bowel movements returned after 48 hrs. Postoperative period was uneventful, and the patient was discharged on the 10th postoperative day. The stone weight was 30 gm and the analysis revealed it was composed mainly of calcium oxalate dihydrate stone weighing 48.24 gm and measuring 5.4*4.6 cm.

DISCUSSION

Primary enterolithiasis may be asymptomatic or may present with sub-acute or acute intestinal obstruction. There are only about 100 reported cases of primary enterolithiasis causing small intestinal obstruction[3]. Presenting features may vary from uncomplicated recurrent intestinal obstruction to complications like ulceration with malaena, perforation, or gangrene of bowel[6].

Enterolithiasis was first described by a French physician Chomelin J in 1710 in the medical series of *Historie de l'Academie Royal*[4] as a case of stone formation in a duodenal diverticulum that was discovered during an autopsy..

Many published articles report enterolithiasis in association with Crohn's disease, jejunal diverticuli, and Meckel's diverticulum leads to small bowel obstruction .But in our case, congenital or acquired bowel diverticulae or any other pathology was not present. Perez et al., and Shetty and Sridhar have also reported absence of any intestinal pathology in patients having small bowel obstruction due to a calcified enterolith[5]. Quazi et al., have reported a large uric acid containing enterolith without any bowel pathology[6].

Other intestinal pathologies reported to be commonly associated with primary enterolithiasis are intestinal tuberculosis, strictures and blind loops.Bery et al reported over 80 cases of enterolithiasis associated with intestinal tuberculosis[7]. In our case, patient had no history of treated abdominal tuberculosis, and, on exploration, they did not have any evidence of active disease or its squeal like bowel hypertrophy, stricture, or bands. It is interesting to note that although intestinal tuberculosis is fairly common in India and is associated with multiple strictures of small intestine, providing ideal conditions for enterolithiasis, but, its occurrence seems to be rare.

Primary enteroliths are primarily diagnosed by multimodal approach based on clinical history, examination, radiological investigations but the definitive diagnosis is made on surgical exploration, removal of stone and its subsequent chemical analysis.

Definitive treatment of enterolithiasis with small intestinal obstruction is completely surgical. The consensus management policy at laparotomy is to first attempt manual lysis of the calculus without enterotomy and then milking the smaller parts into the proximal colon, from where they pass through the rectum. If this is not possible the stone is removed through an enteostomy.

CONCLUSION

Although primary enterolithiasis is a very rare cause of small bowel obstruction, it should be considered in the differential diagnosis when there is no evidence of gallstone ileus, malignancy or stricture. The treatment is essentially surgical for relieving obstruction as well as for confirmation of diagnosis. Prognosis is excellent if there are no other associated comorbid conditions.

Figure 1

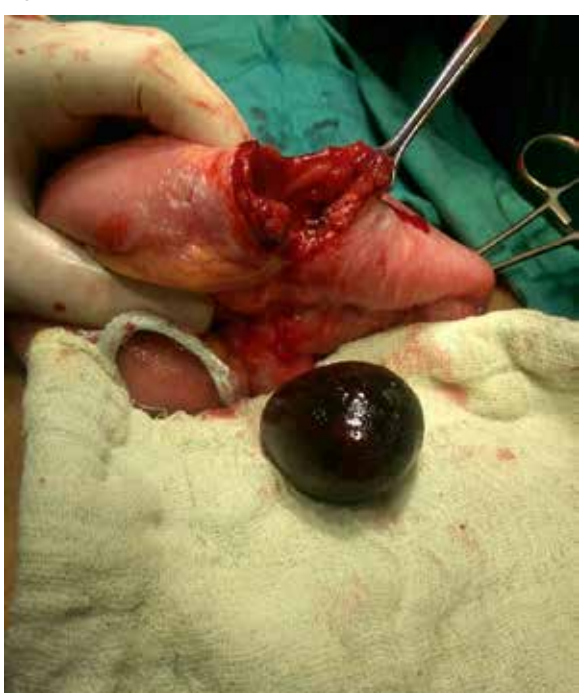

Figure 2

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