

A young child with massive gastrointestinal lithobezoar

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Abstract

Gastrointestinal lithobezoar is a rare condition in which there is the formation of foreign body concretions in the gastrointestinal tract, and such type of patients usually present with the signs and symptoms of intestinal obstruction. We present a rare case of 6 years old female patient incidentally diagnosed with massive gastrointestinal lithobezoar. Colonic lithobezoar usually occurs in the condition called Pica in which there is iron deficiency anemia. Rare number of such cases have been reported till date and such type of patients should be managed conservatively until and unless there is any compelling indication for exploration. All such type of patients should be managed in hospital with kleen enema, parenteral fluids and laxatives and need hematological and psychiatric consultation. In our case as well, the patient was managed conservatively with kleen enema, parenteral fluids and laxatives leading to significant improvement both clinically and radiologically.

Keywords: Gastrointestinal lithobezoar; Pica; lithobezoar; Massive gastrointestinal lithobezoar

1. Introduction

Bezoar is a term used for the accumulation of indigestible materials in the gastrointestinal tract [1]. Such type of patients usually present with nausea, abdominal pain, constipation and sometimes with obstruction [2,3]. Lithobezoar is relatively rare condition where substances having no nutritional value like stones and pebbles accumulate in the gastrointestinal tract often linked to behavioral conditions like pica and most common site for their accumulation is stomach [1,3]. Colonic lithobezoar is the accumulation of stone or pebbles in large intestine, imaging modality in the form of x-ray and CT-scan being used for its diagnosis [1,3]. Conservative management should be tried in the first instance until and unless there is any compelling indication for exploration [3].

1.1. Setting

Ward: General Surgery; Location: Bacha Khan Medical Complex, Gajju Khan Medical College, Swabi.

2. Case Presentation

A 06-year-old girl was brought to the emergency room at Bacha Khan Medical Complex, Swabi on 14 May 2024, with a clean medical record, no history of mental illness or odd conduct in the family, and normal birth and developmental history. She had been complaining of constipation and stomach pain for the past two days, and she had experienced two episodes of vomiting since the previous day.

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On general physical examination the patient was mildly tachycardiac, pale looking otherwise in good state of health. Her abdomen was mildly distended, slightly tender during examination and upon digital rectal examination, there was no anal malformation. However, some hard material was noted in rectum.

To investigate her further, a plain radiograph and initial laboratory investigations were ordered as shown in figure 1 and table 1 as follows. X-ray shows radio-opaque shadows extending from the small intestine till rectum. On laboratory investigations, microcytic anemia was diagnosed and upon digging further history from her guardian, it was found out that she used to eat sand, paper, soil and plastic for the last 02 years, deducing she was suffering from Pica. This habit of child came to their notice when she vomited at that time and the vomitus contained small stones, however no medical consultation was sought till date. The diagnosis of lithobezoar was made keeping in view the history, physical examination and radiological evidence.

The patient was admitted in surgical ward for conservative management; commencing with keeping the patient nil per oral, kleen enema and parenteral fluids. Upon administration of kleen enema, the patient passed large amount of stones as shown in figure 2. She was discharged on third day of admission with the administration of laxatives, iron and multivitamin supplements alongside serial x-rays for at-least the following 03 days and advised follow up to outpatient department after 05 days.



Figure 1 Initial X-ray of the Patient (Plain x-ray erect abdomen showing multiple radio dense shadows throughout abdomen)

Table 1 Laboratory Report Showing low Hb, MCH, MCHC & MCV

Test Description	Level	Normal Range
Haemoglobin (gm/dl)	9.43	4-11
Haematocrit (%)	28.7	12-16
Mean corpuscular volume (ft)	64.1	76.4-102
Mean Corpuscular Haemoglobin (pg)	18	23-36
Mean Corpuscular Haemoglobin concentration (g/dl)	28.1	29-36
Platelets (10 ⁹ /L)	341	150-400
TLC (10 ³ /μ-L)	9.43	4-11



Figure 2 Images showing large amount of Lithobezoar being passed spontaneously after administration of Kleen enema



Figure 3 X-ray erect abdomen of patient on third day after being managed conservatively showing significant improvement



Figure 4 Plain X-ray erect abdomen of the patient on follow-up visit showing significant improvement

3. Discussion

Bezoar can occur in numerous forms and can be categorized as Tricobezoar (accumulation of hairs), lithobezoar (stones), Phytobezoar (fruit and vegetable particles) and Lactobezoar (milk and curd accumulation). Stomach is the most common site for bezoar formation and is rarely seen in colon. Only 06 cases have been reported till 2012 [4]. Colonic lithobezoar occurs due to Pica [4]. Pica is a disorder of appetite in which there is abnormal craving for non-edible materials and satisfaction of such behavior depends on patient's surrounding environment, among which clay eating is the most common one [5]. Such type of patients usually have severe iron deficiency anemia, growth retardation, hypogonadism, intellectual disabilities and psychiatric illness [3,5].

Clinically, such type of patients present with signs and symptoms of intestinal obstruction [6] in the form of abdominal pain, nausea, anorexia, tenderness, bearing positive colonic crunch signs in which masses will be palpated in the colon [3,6,7]. The first line of investigation for such type of cases is X-ray erect abdomen and no other radiological study is needed [6]. Its X-ray presentation demonstrate corn on the cob appearance is also present in our case [6].

Treatment depends on multiple factors including clinical status of the patient and size of stones [8]. Conservative treatment should be tried in the form of manual evacuation, klean or micro or water enema, laxatives and parenteral fluids [6, 8]. Surgery should be considered only if conservative treatment fails or there is colonic injury [6]. In our case, we managed her conservatively with klean enema, parenteral fluids, laxatives, continuous vigilance after which her condition was improved and was discharged on third day of admission. Additionally, iron supplements and multivitamins were given to the patient upon discharge.

4. Conclusion

Colonic lithobezoar is a rare condition that should be suspected in young children having signs and symptoms of intestinal obstruction. Moreover, such type of patients should be evaluated for intellectual disability and asked for behavioral changes that is promptly present in Pica. Such type of patients should always be managed in hospital with laxatives, parenteral fluids, klean enema, serial evaluation done by plain x-rays and should be closely evaluated for any complications. Upon discharge, psychiatric evaluation should also be performed. Iron studies to be performed in patients presented with pica and such patients to be prescribed with iron supplements upon discharge.

Compliance with ethical standards

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Disclosure of conflict of interest

Authors have no conflict of interest to declare.

Statement of ethical approval

It is certified that the Research Title " A Rare Case Report of Young Child with Massive Gastrointestinal Lithobezoar" submitted by Dr Hamza khan s/o Abdul Rauf PG Surgery having RTMC NO. SGR-2023-312-14822 working in surgery unit at MTI-GKMC/BKMC Swabi has been reviewed by Institutional Ethical Review Board and granted permission to publish the study having no Ethical Issue (Review Board: Office of the Chairman Ethical Review Board MTI-GKMC/BKMC Swabi; Approval No. 8203/PF/GKMCS).

Statement of informed consent

Informed written consent was taken from the attendant of the patient about the publication of this case report.

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