Case Report

Childhood Intestinal Obstruction from lithobazoar

*[1]Hesse A.A.J., [1]Appeadu-Mensah W., [2]Welbeck J., [2]Onuoha C.E.O., [2]Boatey J.
[1]Department of Surgery, UGMS, P.O. Box 4236, Accra, Ghana
[2]Department of Child Health, UGMS, P.O. Box 4236, Accra, Ghana

Abstract

Background: Lithobezoar refers to stones within the gastrointestinal tract. Most often found in children, they can precipitate intestinal obstruction, mimicking a variety of medical and surgical conditions.

Patients and Methods: A case of an 11 year old boy with intestinal obstruction due lithobezoar is presented.

Result: A 5kg load of stones was successfully evacuated nonoperatively from the rectum after a plain radiological confirmation of lithobezoar.

Conclusion: Lithobezoar is a cause of intestinal obstruction in children. The diagnosis of lithbezoar requires a high index of suspicion. Non operative transrectal manual evacuation of the stones is a feasible treatment modality that could help avoid costly surgical operations.

Key Words: Lithobezoar, Pica, Intestinal obstruction, children.

Introduction

Lithobezoar refers to the presence of stones in the gastrointestinal tract[1]. It is an extremely rare clinical entity. Stomach is the common site of occurrence of bezoars[2]. Intestinal obstruction due to lithobezoar is rarely reported. A review of literature showed that only one case of intestinal obstruction from lithobezoar has been reported so far[1]. We report a case of subacute bowel obstruction in an 11-year-old boy which was managed successfully without resection of the intestines.

Case Report

An 11yr old pupil was brought to the Children's Emergency Room on account of a 3 day history of lower abdominal pain, tenesmus, painful defecation, gradual abdominal distension, nausea, diarrhea, but no vomiting. His peers had observed over the months prior to admission, that the boy was in a consistent habit of swallowing gravels heaped for school building. His academic work and social

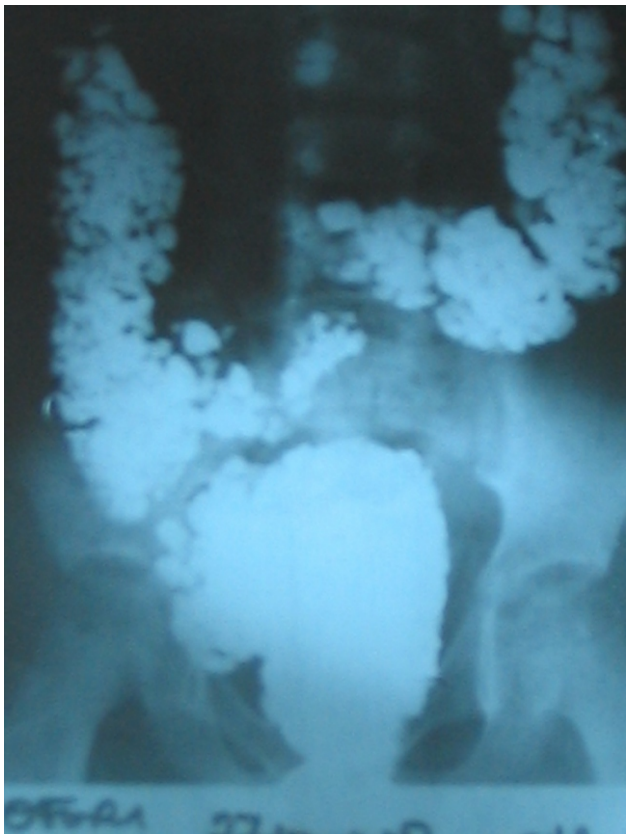


Fig. 1: Plain abdominal X-rays showing gravels in the large colon and rectum

*Corresponding Author**

Copyright © 2005 African Journal of Paediatric Surgery
Published by Child Health Ventures

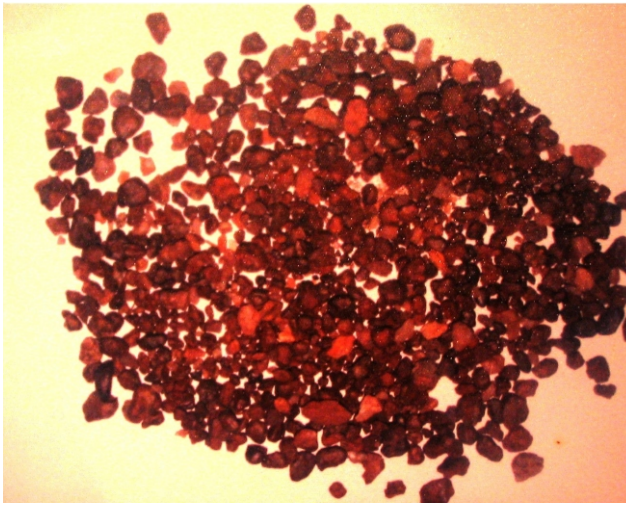


Fig. 2: Stones retrieved from the colon and rectum

activities were normal for his age. There was no history of psychiatric disturbance in the child or in the family and no family history of pica. His family belonged to the medium socio-economic group.

Examination showed a well nourished healthy-looking boy, not pale, well orientated and not in distress. There was no koilynykia or glossitis. The cardiovascular system was normal. The lower abdomen was mildly distended and tender. There were numerous palpable masses in the flanks and epigastrium, which had a gritty feeling and made "coin-like" sounds. The bowel sounds were mildly increased. On digital rectal examination the rectum was loaded with impacted gravels of various sizes (average of 0.5cm-1cm each), but no stool was felt. The gloved finger was stained with blood. His haematological profile was within normal range.

A plain erect abdominal X-ray showed multiple discrete radio-opaque stones filling the entire large colon (Figures 1-2), with multiple air/ fluid levels. There were no stones in the small bowel. The diagnosis of intestinal obstruction secondary to lithobezoar was made.

Gravels of various sizes, shapes and colours were manually evacuated from the rectum (done under Ketamine sedation). Postoperatively, he was placed on Senna syrup for one week during which he passed many more of the remaining stones. A check abdominal X-rays confirmed that he had passed out all the remaining stones. All the stones were weighed and the total weight of stones recovered was 5 kg. The child has since been discharged and returned to school with some counseling. He has since not relapsed into lithophagia or any other form of pica.

Discussion

Bezoars are common occurrences in children. Bezoars result from pica, the appetite for unpalatable or non-nutritive objects[3]. Understandably, it is common in very active and playful children. Pica is not diagnosed within the first 12-24 months of life, because it is usual for young children to ingest whatever comes their way (paint, plastic, string, hair, cloth, animal faeces, stone and paper)[3,4]. Pica is therefore a disorder in older children.

The aetiology of pica is not known. It may be a consequence of parental neglect and deprivation early in life. The actual prevalence of lithophagia is unknown because it is a very rare disorder that is liable to be under- reported. Common observation shows that pica is common in children of low socio economic status, living in deprived, impoverished communities, as was the case in this report.

The consequence of pica is bezoar. Although many cases of trichobezoar or phytobezoar have been reported in children[4-9], there is paucity of reports on ingestion of stones (lithophagia) in children. In many instances, the natural history of bezoar is obstruction of either the gastric outlet, or the intestines as in this report1[1,5-10]. Intestinal perforations and peritonitis are the other consequences of bezoars.

Preoperative diagnosis of uncomplicated lithobezoar may be difficult, unless plain radiography is employed[6]. The use of preoperative ultrsounography had failed to diagnose a bezoar in a previous report[7]. The diagnosis is suspected if there is a history of pica. Bezoars may present in several ways, as subacute intestinal obstruction with nonspecific abdominal pain or constipation (for which there are many differentials), as acute

Copyright © 2005 African Journal of Paediatric Surgery
Published by Child Health Ventures

intestinal obstruction or as intestinal perforation with peritonitis[4,5 7-10].

Usually surgery is required to remove lithobezoar if the bezoar fails to pass spontaneously, or to treat associated complications[4-7,9]. In many reports bezoars were evacuated via enterotomy or by resecting the segment containing these foreign bodies. The problem with this method is that there may be dehiscence of bowel anastomosis or closure, leading to faecal leakage and peritoneal soilage. The fear of such leakage made Anslan et al to undertake a successful removal of trichbezoars via appendix stump after milking the bezoar into the caecum[7]. Manual evacuation after external fragmentation of lactobezoar has been advocated by some authors[4]. Although we successfully evacuated the stones without having to perform a laparatomy in the present report, intestinal perforation is a possible hazard to watch out for while using this approach to treat lithobezoar. The advantage of this approach is that it eliminates the cost of surgery. Long term therapy involves counseling, behavioral therapy and aversion therapy.

We like to conclude that lithobezoar can be a cause of acute intestinal obstruction in children. Although an extremely rare condition, the diagnosis should be born in mind while evaluating any older child who presents with features of intestinal obstruction especially if there has been a previous or family history of pica. Non-operative manual evacuation is a feasible alternative to surgical treatment.

References

1. Rathi P, Rathi V. Colonic lithobezoar. Indian J Gastroenterol. 1999 Apr-Jun;18(2):89
2. Varma A, Sudhindra BK. Trichobezoar with small bowel obstruction. Indian J Pediatr. 1998 Sep-Oct;65(5):761-763.
3. Heger S. [Pica--the desire for unpalatable substances. Feces, hair and loam as palate teasers? (interview by Dr. med. Julia Rautenstrauch)] [Article in German] MMW Fortschr Med. 2002 Feb 7;144(6):12-13.
4. Steinberg R, Schwarz M, Gelber E, Lerner A, Zer M. A rare case of colonic obstruction by 'cherry tomato' phytobezoar: A simple technique to avoid enterotomy. J Pediatr Surg. 2002 May;37(5):794-795.
5. Venuta A, Bertolani P, Guaraldi N, Cano C, Perrone A, Scarone PC. [Unusual cause of ileal occlusion: a coconut bezoar] [Article in Italian]. Pediatr Med Chir. 2001 May-Aug;23(3-4):203-204.
6. Zafar A, Ahmad S, Ghafoor A, Turabi MR. Small bowel obstruction in children due to persimmon phytobezoars. J Coll Physicians Surg Pak. 2003 (8):443-445.
7. Aslan A, Unal I, Karaguzel G, Melikoglu M. A case of intestinal obstruction due to phytobezoar--an alternative surgical approach. Swiss Surg. 2003;9(1):35-37.
8. Ameh EA, Nmadu PT. Gastrointestinal obstruction from phytobezoar in childhood: report of two cases. East Afr Med J. 2001 Nov;78(11):619-620.
9. Diop B, Ngom G, Ndiaye A, Elmouhib R, Fall I, Ndoye M. [Trichobezoard revealed by intestinal perforation. A case report] [Article in French]. Dakar Med. 2004;49(2):83-85.
10. Lynch KA, Feola PG, Guenther E. Gastric trichobezoar: an important cause of abdominal pain presenting to the pediatric emergency department. Pediatr Emerg Care. 2003 Oct;19(5):343-347.

Copyright © 2005 African Journal of Paediatric Surgery
Published by Child Health Ventures