



AN INTERESTING CASE OF PEDIATRIC INTESTINAL OBSTRUCTION ARSHAD ALI T M

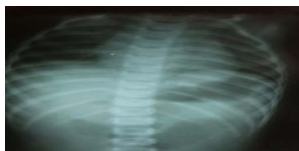
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Abstract : Foreign body ingestion is a potentially serious clinical problem in children. We report a case of an 18-month-old female child who developed complete bowel obstruction requiring laparotomy due to ingestion of a superabsorbent polymer ball with advertised growth up to 400 times its original size. Most ingested foreign bodies that pass through the pylorus will make it safely through the gastrointestinal tract. This is not true for water-absorbing balls that progressively increase in size and cause intestinal obstruction. These rapidly expanding objects can cause significant morbidity, and timely diagnosis and treatment are prudent to improve patient outcomes.

Keyword : Superabsorbent polymer ball, intestinal obstruction, pediatric foreign body ingestion, hygroscopic ball
18month old female child admitted with the c/o vomiting –4 episodes/day – bilious for the past 4 days. There was no history of incessant cry/ bleeding PR. Child had treatment for the same complaints at a private hospital for the past 3 days. On examination the child was mildly dehydrated ,HR-120/min RR-26/min, CVS-S1S2+,RS-NVBS B/L AE+, Abdomen-soft, distended, vague mass felt in right side of umbilicus. PR-Rectum empty, no blood, no mass palpable

INVESTIGATIONS

Blood investigations were within normal limits X ray abdomen erect-showed dilated small bowel loops



Clinical diagnosis of Small Intestinal obstruction was made. Considering the age the possible causes could be

- Intussusception
- Meckel's band obstruction

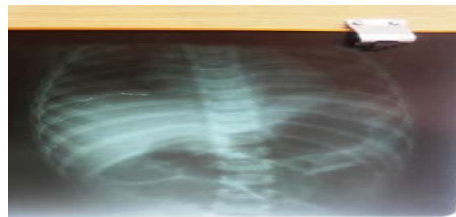
USG Abdomen showed

- Bowel loops appear dilated with fluid level.
- 4 x 3cm intraluminal clear thin walled cystic lesion noted in the ileum with proximal dilatation

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-distal loops appear collapsed.

IMP: F/S/O Intraluminal Duplication Cyst causing Intestinal Obstruction Repeat x ray abdomen – after 6 hours showed increased dilatation of small bowel loops



Provisional diagnosis of Duplication cyst causing intestinal obstruction was made and planned for Exploratory Laparotomy
Intra operative Findings -Cystic lesion of size 3 x 3cm found in the proximal ileum with proximal dilated loops with distal collapsed loops

-Cystic lesion was within the wall of bowel and was not mobile separately Proceeded with resection and anastomosis of the bowel



Resected specimen was examined and revealed the findings as shown in the following images to our surprise !!!!



The resected specimen was cut open and a ball was found running down the table and there was an area of pressure necrosis in the ileal mucosa as shown in the above pictures. Subsequently when enquired the mother-said this toy was bought from the market for their hygroscopic properties



Post operative period was uneventful. Patient was discharged on POD #7

DISCUSSION

- An estimated 40% of foreign body ingestions in children are unwitnessed
- 80% to 90% of foreign bodies pass spontaneously,
- 10% to 20% require endoscopic removal and 1% require surgical removal
- Superabsorbent polymer (SAP) beads, which may absorb large quantities of fluid and if ingested have a high potential for causing intestinal obstruction.
- Furthermore, due to the unique growth properties of these balls, there is a high likelihood that nonoperative management will fail.

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-These rapidly expanding polymer balls can exceed the normal diameter of the small bowel (2.5–3.0 cm) within 6 hours of ingestion

LITERATURE REVIEW

First reported in pediatrics journal of the American Academy of Pediatrics in 2010 Another similar case of hygroscopic jelly causing intestinal obstruction with subsequent mortality was reported from Pakistan in 2012 Most probably this could be the third case in the world as per literature review According to European commission Health and Consumers this products is banned in UK and in Malta in 2010

Author	Title	Year	Journal	Volume	Page
Irving J. Zamora, Lan T. Vu, Emily L. Larimer and Oluyinka O. Olutoye	Water absorbing balls a growing problem	2012	Pediatrics	130	e1011
Dahshan A.	Management of ingested foreign bodies in children	2001	J Okla State Med Assoc	94(6)	183–186
Kay M, Wyllie R.	Pediatric foreign bodies and their management	2005	Curr Gastroenterol Rep	7(3)	212–218
Selivanov V, Sheldon GF, Cello JP, Crass RA.	Management of foreign body ingestion	1984	Ann Surg	199(2)	187–191

The objective of presenting this unique case is to alert the General practioners and pediatricians
-to the existence of such toys in the market
-to educate the general public to watchfully avoid such toys till a ban is enforced in our country.

REFERENCES

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