



FOREIGN BODY INSERTION THROUGH STOMA IN A CASE OF BLUNT ABDOMINAL TRAUMA: A CASE REPORT

Paediatric Surgery

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ABSTRACT

Children are more susceptible to blunt abdominal trauma than adults due to their anatomical differences. Bicycle injuries in children are quite common. The diagnosis is often difficult due to the variability in presentation and is also often delayed. A presentation of gastrointestinal foreign body after its ingestion is quite a common phenomenon seen in children; however, insertion through a stoma is quite rare. A gastrointestinal foreign body should be diagnosed and treated promptly lest complications follow. We report a case of a 9-year-old boy with ileal perforation following cycle handle injury. The child underwent surgical intervention. On follow up, the patient presented with accidental insertion of foreign body through an end of the intestine, which had prolapsed through the enterocutaneous fistula. The foreign body was removed surgically. Patient was discharged. In conclusion, a comprehensive management of trauma cases in the pediatric population is a necessity. In our case, over six months of follow up, the child could make it through every stage of surgical stress because the care was focused on comprehensive management of trauma, stoma care, nutritional aspect, physiotherapy and psychological issues.

KEYWORDS

Blunt abdominal trauma, Cycle handle injury, foreign body, pediatric, pediatric surgery

Case Report

A 9-year-old boy presented with a history of pain in abdomen for 3 days, following cycle handle injury. Pain was generalised and dull and was associated with non-bilious vomiting.

On examination, the vitals of the patient were within normal parameters. Abdomen was tense with generalised tenderness and rebound tenderness. Bowel sounds were absent. Rest of the systemic examination was normal.

Child was investigated by abdominal skiagram and sonography, which showed free air and loculated collection respectively. Routine blood investigation showed anemia with leukocytosis.

Exploratory laparotomy with midline incision was done. There was a single ileal perforation, 60 cm from duodeno-jejunal flexure. A thorough lavage of the abdomen was done followed by a loop ileostomy. The boy developed complete wound dehiscence of the abdominal wound on post-operative day 20 with necrotizing fasciitis of the abdominal wall. Due to loss of significant portion of the abdominal wall, the abdomen was closed with a Bogota bag.

Since the stoma was quite proximal, it was planned to initiate distal loop refeeding of the jejunostomy content which got collected in the stoma bag. A Foley catheter was inserted into the distal limb to achieve this. In two weeks, the wound contracted and the boy was thereafter discharged. The child was followed up meticulously using telecommunication services, as there were restrictions due to pandemic (COVID 19).

After one month, the boy came for a follow-up with a history of complete insertion of the Foley catheter along with the syringe (which was being used for refeeding), into the distal limb. On examination the Foley catheter could not be visualized through the distal limb and could not be palpated in the abdomen as well.

A re-exploration was done. The Foley catheter along with the syringe (Fig1) was felt at the proximal part of ileum which was removed by enterotomy. (Fig 2)

The stoma site was re-anastomosed with linear cutter staplers. Postoperatively the patient was managed in the ward. The stay was uneventful.

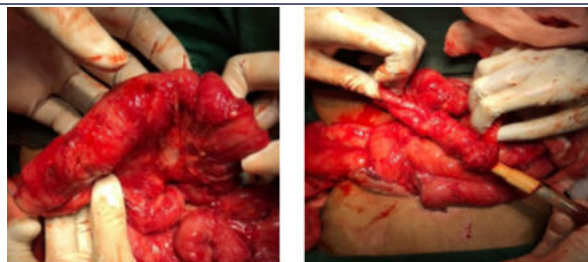


Fig 1: The retrieval of foreign body from the small bowel: Foley catheter with a syringe



Fig 2: Foley catheter with the inflated bulb being retrieved from the small bowel

DISCUSSION

Bicycle injuries are a common cause of childhood trauma, although handlebar injuries are relatively rare, as seen in our case. [1,2] As reported by a systematic review, handlebar injuries are more dangerous than non-handlebar injuries as they lead to blunt trauma intra-abdominally as well as intra-thoracically more often.[3] Often seen in males with variable symptoms. As the external injuries are not that severe and difficulty in communication by children, often lead to delay in management. [4-7]

Probably due to the above reason, there is also a time lag (average: 18-23 hours) in the presentation of such injuries to emergency room. [8-10]

Common clinical features that a patient of handlebar injury presents with include abdominal pain, guarding, vomiting, fever and external injuries. In our case, all the symptoms were noted, except for any external injuries.

Therefore, history taking, charting of vital signs and re-assessment at intervals play an important role, till the diagnosis is made and a plan is formulated.

In our case, abdominal radiography showed air under the diaphragm and ultrasonography suggested free fluid in the abdomen, which warranted an immediate laparotomy, wherein a single ileal perforation was found.

Refeeding through a stoma is a technique that is seldom applied and hence the literature on such cases is lacking. Through the cases available, it has shown to improve the nutritional status of the patient. [11,12] Amidst the ongoing COVID pandemic, this technique proved to be promising.

Pediatric foreign body ingestion is common in less than five years of age. According to a guideline, for a suspected/witnessed long foreign body ingestion, irrespective of symptoms, and endoscopy is warranted. For a long foreign body, impacted in the esophagus (25mm), prompt removal within 24 hours is advised. Also, if the length of foreign body is >6cm, in rare circumstances it may pass through the duodenum. Therefore, removal of long foreign bodies impacted in the oesophagus and stomach is advised. [13]

In our case, a long blunt foreign body (Foley catheter along with syringe) was suspected to be somewhere in the small bowel.

Upon further literature search for management of a long unique (Foley catheter with its inflated bulb along with syringe) foreign body, it was found that blunt objects beyond stomach that remain in same location for > 1 week, should be removed surgically. If there are symptoms associated in such cases, emergency surgery for removal of foreign body is advised. Being a witnessed accidental insertion (by mother) of a radiopaque foreign body, the radiograph was not of much relevance in our case. [14,15]

We decided for an exploratory laparotomy for its removal. In our case, a decision for surgery was taken by considering several factors –

1. Being a proximal stoma, an early closure will help in the nutritional build-up of the child.
2. The COVID-19 Pandemic had few limitations (especially in a developing country) during a post operative follow up of a surgical condition. The second covid wave had hit the country, we wanted a better outcome and early recovery for this child taking into follow up limitations.

This unique case left us with few questions- Do we need to have a guideline for a “developing country”, taking into consideration the follow up limitations, the availability of imaging services as well as endoscopy facilities -during the period of observation/follow up and availability of point of contact medical/emergency centres. For such unique circumstances, where do we stand in our research. Decision in such rare cases, in our opinion should be subjective and depending upon the attending surgeon.

CONCLUSION

This case report encompasses the rare event of a Foley catheter completely migrating through the distal limb along with the peristalsis of the intestine. There has been no report of similar incidence in the literature to the best of our knowledge. This case report is important as one should be careful with feeding devices especially in the distal limb as it can migrate distally and may be a cause of obstruction and morbidity.

Declaration of Conflict of Interest

The authors declare that there is no conflict of interest.

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