

Inguinal Hernia with Incarcerated loop of Sigmoid Colon and Impacted Hard Fecolith in an Infant: Rare Presentation

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Abstract

Incarcerated inguinal hernia is not an uncommon occurrence and the rate of incarceration in inguinal hernias has been variably reported between 3 and 16% with higher incidence among infants. Sigmoid colon as a content of hernia is itself an uncommon occurrence and associated impacted large and hard fecolith makes it a rare case in pediatric age group. Only single published case report could be found depicting these findings in young age group. Here we report 1-year-old child presented with 24 hours history of obstructed left-sided inguinal hernia. On exploration loop of sigmoid colon was identified with impacted fecolith.

Keywords: hernia; sigmoid colon; fecolith; inguinal hernia; incarceration

Introduction

Inguinal hernia is one of the most common surgical conditions with an overall incidence of 0.8% to 5% in full-term infants [1, 2], but the risk is significantly increased (upto 30 %) in low birth weight (<1 kg) and premature infants [2, 3]. The risk of incarceration in children ranges from 3% to 16%, although it is as high as 31% in premature infants, with most occurring within the first year of life [4, 5]. Most of the cases present with a swelling in groin area that increases on straining, discovered by the parents or a pediatrician. Complications may present as incarceration of the herniating abdominal contents, with or without features of intestinal obstruction. Strangulation occurs if not attended early and poses a risk of increased morbidity and mortality. The incidence of incarceration is higher in first 1 or 2 years of life as they have a smaller and tighter internal ring and inguinal canal that easily traps the herniating loops of bowel. Obstructed inguinal hernia with incarcerated bowel loops and impacted fecolith is even uncommon especially in infants and younger age group. Here we report and discuss a case of incarcerated inguinal hernia with impacted hard fecolith who presented after 24 hours of irreducibility but before signs of strangulation. Inguinal exploration revealed obstructed bowel loop with hard fecolith, which was removed via enterotomy and bowel repaired, reduced and repositioned.

Case Report

A 1-year-old child presented to the emergency department with painful left-sided inguinal swelling for 24 hours. Child also had history of two episodes of non-bilious vomiting and mild abdominal distension.

According to the mother swelling was initially reducible, that used to increase on crying and decreased on sleeping for the last 2 months. But over the last 24 hours, mother noticed that the swelling wasn't reducing and was then followed by 2 episodes of non-bilious vomiting, reluctance to feeds, mild abdominal distension, excessive crying and irritability. Mother also gave history of constipation and passing hard stools over the last two months. On asking about dietary history, mother revealed that the child was consuming milk as staple diet. At presentation child was conscious, and alert with no signs of respiratory distress. His vitals were blood pressure of 88/50 mmHg, heart rate 119 beats/min, respiratory rate 18 breaths/min and temperature was 99.2°F. Oxygen (O₂) saturation was 97% on room air. Pertinent physical findings revealed globular, tender and irreducible swelling in left inguinal region with no visible signs of inflammation. Left sided testis could be palpated at the root of scrotum. Abdomen was soft with mild fullness but without any signs of peritoneal irritation. Rectal examination was not done. Emergency ultrasound abdomen was done that suggested left sided inguinal hernia with bowel loops as contents. Bowel wall showed vascularity and mild fluid in hernial sac. Haematological investigations revealed hemoglobin 11.3g/dl, TLC 12,600/dl, Platelet count 2.8L/mm³, HCT 39%, T. Bilirubin 0.3mg/dl, AST/ALT 46/53 U/L, blood urea 11 mg/dl, serum creatinine 0.9mg/dl, Na⁺ 138 meq/L, K⁺ 3.6 meq/L and normal coagulation profile (PT 12s, INR 1.1). Patient was planned for emergency operation and left-sided inguinal exploration was done. Intra-operatively hernial sac was identified with dilated healthy segment of sigmoid colon obstructed at the neck of sac with hard fecolith (Fig.1). Colour and peristaltic activity of bowel segment was normal. As fecolith impacted loop could not be

reduced, enterotomy was done and fecolith was removed (Fig.2). After the closure of enterotomy and wound lavage, deep inguinal ring was dilated and bowel segment was reduced. Herniotomy was done with posterior wall strengthening and wound was closed in layers. Intraoperatively per rectal examination was done and impacted hard stool pellets were removed. Postoperative period was uneventful and child

passed stools on third postoperative day. The child was started oral feeds on the fourth postoperative day and discharged next day. Mother was given a dietary plan for child regarding decrease milk intake and starting complementary feeds with increased fibre and solid diet. Child followed up in outpatient after 1 week. He was asymptomatic and tolerated feeds without bloating, distension or emesis.



Figure 1 and 2: Intra-operative pictures showing loop of sigmoid colon with impacted fecolith and removed hard fecoliths after enterotomy.

Discussion

The rate of incarceration in inguinal hernias has been reported between 3 to 16% with higher incidence among infants. [5] This can be explained because of smaller inguinal canal and internal ring through which loops of herniating bowel can easily be trapped causing obstruction or later strangulation. Most inguinal hernias are reducible at presentation but become complicated when incarceration occurs and this may progress to intestinal obstruction. Initially the contents usually loops of bowel are trapped at the neck of the sac which is already small and narrow without interference to the blood supply. Because of the obstruction, venous congestion and oedema of the wall occurs, progressing if not reduced to bowel ischemia, infarction and gangrene termed strangulation. [6] An incarcerated hernia presents as an irreducible inguinal bulge that is tender and may be erythematous. The child is usually irritable, and may have obstructive symptoms such as nausea/vomiting, not passing stools, and abdominal distention. If incarceration progresses to strangulation, the child may have peritonitis, bloody stools, and hemodynamic instability. Other conditions may be confused for an incarcerated hernia, such as a retractile testis, lymphadenopathy, and hydrocele. [7] Although ultrasonography has been described as a tool to help differentiate these causes, [8] physical examination can help make the correct diagnosis. Obstructed inguinal hernia with incarcerated bowel loops and impacted fecoliths is an uncommon event in younger age group. Only single published case report was found depicting findings of obstructed inguinal hernia with incarcerated bowel loops and impacted hard fecoliths in young pediatric age group. [9]

Conclusion

Our goal of this case publication is to show that sigmoid colon with impacted hard fecoliths can be a content of incarcerated inguinal hernia even though it is an extremely rare presentation. Timely investigation and

treatment helps in preventing possible morbidity or mortality secondary to complications.

References

1. Chang SJ, Chen JC, Hsu CK, Chuang FC, Yang SD. (2016). The incidence of inguinal hernia and associated risk factors of incarceration in pediatric inguinal hernia: a nationwide longitudinal population-based study. *Hernia*. 20(4):559-563.
2. Burgmeier C, Dreyhaupt J, Schier F. (2014). Comparison of inguinal hernia and asymptomatic patent processus vaginalis in term and preterm infants. *J Pediatr Surg*. 49(9):1416-1418.
3. Lautz TB, Raval MV, Reynolds M. (2011). Does timing matter? A national perspective on the risk of incarceration in premature neonates with inguinal hernia. *J Pediatr*. 158(4): 573-577.
4. Stylianos S, Jacir NN, Harris BH. (1993). Incarceration of inguinal hernia in infants prior to elective repair. *J Pediatr Surg*. 28(4):582-583.
5. Rajput A, Gauderer MWL, Hack M. (1992). Inguinal hernias in very low birth weight infants: incidence and timing of repair. *J Pediatr Surg*. 27(10):1322-1324.
6. Parmar G, Dabhoiwala T, Hathila VP. (2008). Uncommon presentation of inguinal hernia: Burst obstructed inguinal hernia with ileo-ileal intussusception. *Internet J Surg*.
7. Fraser JD, Snyder CL. (2014). Inguinal hernias and hydroceles. In: Ashcraft KW, Holcomb GW, Murphy JP, et al, editors. *Ashcraft's pediatric surgery*. 6th edition. London: Saunders/Elsevier. 679-686.
8. Mishra DS, Magu S, Sharma N, Rattan KN, Tewari AD, Rohilla S. (2003). Imaging in acute abdomen. *Indian J Pediatr*. 70(1):15-19.
9. Roy AK, Ghildiyal JP. (2008). Impaction of feces in a loop of sigmoid colon: A rare cause of incarceration of inguinal hernia in children. *Internat J surg*. 6(6):7-8.



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