INTRAMESOSIGMOID HERNIA PRESENTING AS INTESTINAL OBSTRUCTION

Nadeem Ahmad¹, Nameer Faiz², Rinku Kumari³, Krishna Gopal⁴

¹Senior Resident, Department of General Surgery, Indira Gandhi Institute of Medical Sciences, Patna, India.

²Senior Resident, Department of General Surgery, Indira Gandhi Institute of Medical Sciences, Patna, India.

³Senior Resident, Department of General Surgery, Indira Gandhi Institute of Medical Sciences, Patna, India.

⁴Associate Professor, Department of General Surgery, Indira Gandhi Institute of Medical Sciences, Patna, India.

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PRESENTATION OF THE CASE

A 55-year-old male was admitted in the surgical emergency department with a 2-day history of central abdominal pain, abdominal distension and non-passage of flatus and stool with single episode of vomiting. Patient had no previous surgical history. Patient had stable vitals and general condition. Abdominal examination revealed mildly distended abdomen mainly around umbilicus, but otherwise soft with slight tenderness. Bowel sounds were sluggish. No inguinal hernias were present. Erect abdominal x-ray revealed 4 - 5 air-fluid levels without much bowel dilatation (Fig. 1).

Conservative management was attempted for 24 hours with NG tube and intravenous fluid resuscitation, but the patient's condition remained unchanged. Exploratory laparotomy was performed and intraoperative findings showed dilated proximal small bowel loops. The bowel loops were traced and transition zone of dilated and collapsed bowel was found. Segment of small bowel 1 feet proximal to ileocaecal junction was found herniating through a defect in the left surface of sigmoid mesocolon (Fig. 2). Herniated bowel was pulled out gently after carefully dissecting and dilating the margins of hernia defect. The incarcerated part of the bowel was 8 cm in length with developing stricture due to pressure from hernia defect margins (Fig. 3). Bowel was viable and showed much improvement in colour and peristalsis after hot fomentation, so no bowel resection was required. An oval hernia defect was present only on the left leaf of sigmoid mesocolon around 2.5 cm in size (Fig. 4), which was repaired with absorbable sutures.

Patient improved symptomatically and was discharged. Patient was followed up for 1 year and had no complaints or complications.

DIFFERENTIAL DIAGNOSIS

- Bands and adhesions.
- Intussusception.
- Volvulus.

CLINICAL DIAGNOSIS

Intestinal obstruction due to internal hernia.

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Corresponding Author:

Dr. Nadeem Ahmad,

Flat-312, Tara Towers Apartment,

P. O. Shastri Nagar,

Patna-800023,

Bihar, India.

E-mail: ahmad.drnadeem@gmail.com

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PATHOLOGICAL DISCUSSION

The most common cause of intestinal obstruction is post-operative adhesions. Internal hernia is the protrusion of intra-abdominal viscera through peritoneal and mesenteric orifices or defects within the peritoneal cavity. Internal hernia is a rare cause of Intestinal Obstruction accounting for 5.8% of the cases and paraduodenal hernia representing 50% of all the cases.^{[1],[2]}

Sigmoid mesocolic hernia is a rare type of internal hernia with intramesosigmoid hernia being the rarest.^{[3],[4],[5]}

Surgical approach through either exploratory laparotomy or laparoscopic approach is the standard of treatment. We present a case of Intramesosigmoid hernia causing small bowel obstruction, which was managed by surgical laparotomy.

Intestinal obstruction due to internal hernia is rare (5.8%) and even rarer is the internal hernia involving the sigmoid mesocolon accounting for only 5% of the internal hernia cases.^[6]

Benson et al^[7] classified sigmoid hernia into three types- (Fig. 5)

1. Intersigmoid Hernia: Herniation into an intersigmoid fossa, situated at the attachment of the lateral aspect of the sigmoid mesocolon.
2. Transmesosigmoid Hernia: Incarceration of intestinal loops through an isolated, oval defect in the sigmoid mesocolon.
3. Intramesosigmoid Hernia: A congenital, oval defect unrelated to the intersigmoid fossa is present in the lateral peritoneal surface of the mesocolon and herniation occurs. A normal fusion fascia is present and the right leaf is intact in this setting.

In our case, it was intramesosigmoid hernia (Type 3) according to the Benson et al classification. Benson et al was the first to describe a patient with intramesosigmoid hernia in 1963.^[7] An intramesosigmoid hernia is predominantly seen in males with a peak incidence in 6th decade of life.^[7,8-12]

Although, pre-operative diagnosis is difficult, but CT scan of abdomen can suggest diagnosis with findings like a cluster of dilated fluid filled small bowel loops entrapped in the left posterior and lateral aspect of sigmoid colon with mesenteric vessel engorgement and dilated proximal bowel loops.^[13]

DISCUSSION OF MANAGEMENT

Although, small bowel obstruction due to mesocolic internal hernia is rare, but should be suspected when the patient has no previous surgical history, tuberculosis or external hernia. Internal hernia is an uncommon cause of small bowel obstruction. Internal hernia is difficult to diagnose clinically.

Pre-operative diagnosis is uncommon, but CT may suggest the diagnosis. It is interesting to know that congenital internal hernia is more common in paediatric age group.^[14] Our case was a 55-year-old male, so high index of suspicion and early surgical exploration is recommended in such cases of diagnostic dilemma to reduce the morbidity and mortality.

Figure 1. X-Ray Abdomen Erect showing Multiple Air-Fluid Levels and Dilated Small Bowel Loops

Figure 2. Small Bowel Loop Herniating through the Mesocolic Defect

Figure 3. Incarcerated Bowel Loop Segment showing Stricture due to Pressure from Hernial Defect Margin

Figure 4. 2.5 cm Oval Hernial Defect on Left Leaf of Sigmoid Mesocolon

Figure 5. Benson et al Classification of Sigmoid Hernia

FINAL DIAGNOSIS

Intramesosigmoid hernia.

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