displacement. They can also be used as a conduit for subsequent endoscopic drainage.[6]

Stent displacement has been reported only rarely with these stents due to the flanges incorporated into their design. Yamamoto et al reported one patient with spontaneous stent migration among 9 patients undergoing cystogastrostomy.[3] Talreja et al reported one such case in a series of 18 patients.[4] In our patient, the CSEMS got spontaneously expelled through the gut without causing any symptoms and this was only incidentally detected during follow-up.

Migration of metal stents may lead to complications such as intestinal obstruction or perforation, which fortunately did not happen in our patient.

AJINKYA SONAMBEKAR
DEVENDRA DESAI
PHILIP ABRAHAM
ANAND JOSHI
TARUN GUPTA
HARSHAD JOSHI
RISHIKESH KALERIA
VATSAL MEHTA

Department of Gastroenterology,
P. D. Hinduja Hospital and Medical Research Centre,
Mumbai, India

Corresponding Author: Dr Devendra Desai
Email: dr_ddesai@hindujahospital.com

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Neonatal Intussusception: A Rare But Important Cause of Bleeding Per Rectum in A Neonate

Intussusception is one of the most common causes of intestinal obstruction in infancy and children.[1] It can occur at any age but commonly seen between 6 to 18 months of age.[1] Neonatal intussusception is rare and comprises 0.3 to 1.3% of all intussusceptions.[2] The presentation, pathology, and management of neonatal intussusception are quite different from the usual infantile and childhood intussusception. The rarity of pathology in this age group and difficulty in appreciating the classic symptomatology of intussusception in the neonate contribute to the delay in diagnosis which increases the morbidity and mortality. We herein report a case of intussusception in a neonate presenting in his first 7 days of life with bleeding per rectum causing diagnostic confusion leading to delay in diagnosis and management.

Case Report

A full term male child born by spontaneous vaginal delivery with a birth weight of 2.3 kg and on breastfeeds presented on day 6 of life with a history of bleeding per rectum. He was dehydrated with poor capillary filling. On examination, he had tachycardia (heart rate-162/minute),

blood pressure - 98/50 mm of Hg with a respiratory rate of 38/min. The abdomen was mildly distended, but no mass was palpable. He was admitted and resuscitated. On further evaluation, a prolonged prothrombin time (International Normalized Ratio >3.5) was documented, hence an initial diagnosis of hemorrhagic disease of the neonate was made and treated accordingly with plasma and vitamin-K. Despite the correction of coagulation profiles, the bleeding per rectum continued.

The child was further investigated. An abdominal X-ray revealed prominent bowel loops **(Figure 1)**, Ultrasound abdomen revealed mild ascites. Upper gastrointestinal tract contrast study was done to rule out volvulus, and it showed a dilated stomach with normal bowel loops with no evidence of malrotation **(Figure 2)**. As the child had repeated episodes of bleeding per rectum, a repeat ultrasound was done with a high index suspicion of duplication cyst, which revealed an ileo-colic intussusception without any lead point.

Looking at the child's condition and duration of symptoms, the baby was posted for an emergency exploratory laparotomy. Per-operatively, ileo-colo-colic intussusception was found reaching up to proximal sigmoid colon **(Figure 3)**. On attempted reduction, the intussusceptum got perforated revealing a gangrenous bowel segment. The terminal 4 cm of ileum to descending colon was resected and end to end ileo-sigmoid colon anastomosis was done. The post-operative period was uneventful. Histopathology of the resected specimen showed a haemorrhagic infarct and no pathological lead point was found.

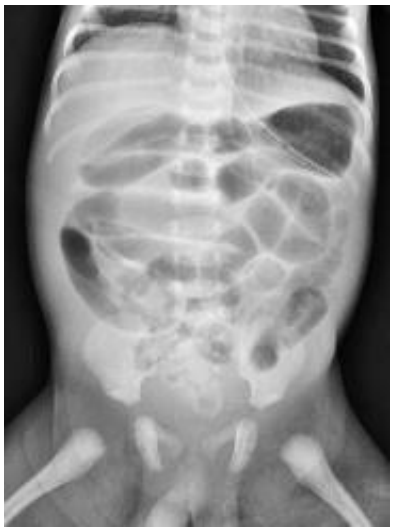

Figure 1: Plain X- ray abdomen supine view showing prominent bowel loops.

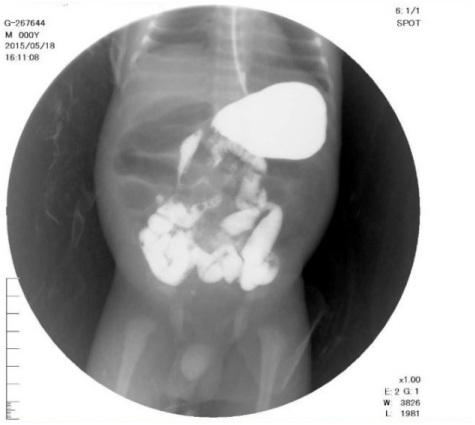

Figure 2: Upper gastrointestinal contrast showing dilated stomach and normal calibre bowel loops, no evidence of malrotation.

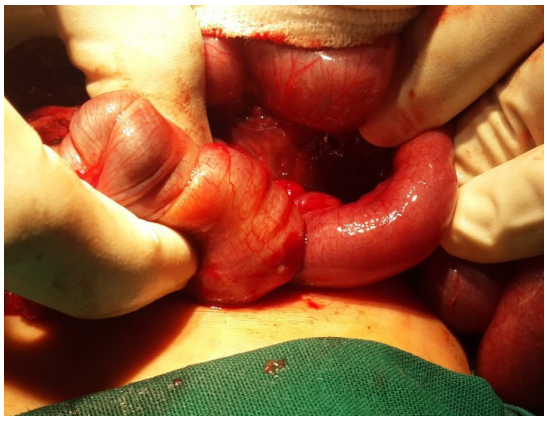

Figure 3: Per operative image showing ileo colo colic intussusception.

Discussion

Bleeding per rectum in a neonate is commonly due to necrotising enterocolitis, infectious colitis (Shigella, Yersinia, Salmonella, etc), cow milk protein intolerance, haemorrhagic disease of the newborn, anal fissure and congenital gut anomalies (malrotation with volvulus, Meckel's diverticulum, duplication cyst).[3] Rarely a neonate with intussusception can present with bleeding per rectum causing a diagnostic dilemma.

Neonatal intussusception differs from infantile intussusception in pathology and presentation. The classic features of intussusception often seen in infant and

children are not appreciable, and evidence of abdominal pain and palpable abdominal mass is uncommon. Neonatal intussusception often present with signs of intestinal obstruction. Rectal bleeding occurs in 75% cases and usually occurs late. Gorgen–Pauly et al[4] in their analysis of 17 cases of neonatal intussusception reported presence of abdominal distension in 100% cases, bilious aspirate in 76% cases (10/17), bloody stool in 58% cases (10/17) and rarely a palpable abdominal lump in 5/17 cases. Awareness of this rare entity presenting as bleeding per rectum among neonatologists is critical to obviate the delay in diagnosis. Twenty nine per cent cases are associated with a pathological lead point such as a hamartoma, a Meckel's diverticulum or a duplication cyst.[5] Our case differs from the rest as there was no identifiable lead point. Our patient was a neonate, unlike most idiopathic ileocolic intussusceptions which are typically seen in the infant.

The aetiology of neonatal intussusception remains to be understood. It is believed that neonatal intussusception is often due to a pathological lead point. This may be true to some extent in full term infants. However, in a review of literature of preterm neonates with intussusception, no identifiable pathological lesion was identified as lead point. Various causes have been postulated for neonatal inussusception-an identifiable lead point in full-term neonates to perinatal risk factors causing intestinal hypoperfusion/hypoxia, dysmotility or intestinal stenosis in the preterm neonate.[6,7] However lead points like duplication cysts, hamartomas and Meckel's diverticula could be demonstrated only in 5% cases.[8]

Ultrasound is the initial investigation of choice as it is quick, easy, non-invasive and reliable. However, the role of USG in detecting neonatal intussusception is not well established, although it has been reported to be used to make a correct a diagnosis in some cases. Hence, a high index of suspicion must be kept in mind during ultrasonographic examination. The first ultrasound missed the intussusception and was diagnosed after the second ultrasound when the bleeding per rectum persisted after correction of coagulation profiles causing a delay in diagnosis in our case. Serial abdominal ultrasounds may prove to be valuable aids in the early diagnosis of neonatal intussusception and differentiating it from NEC. A contrast enema is very helpful in the diagnosis of neonatal intussusception with a colonic component;however, it does not help when the colon is not involved which is usually the case in preterm neonatal intussusception. Not uncommonly, the diagnosis is made only on laparotomy for intestinal obstruction.[5] All neonatal intussusceptions need to be explored without delay keeping in mind the high incidence of pathological lead points and to obviate ischemic necrosis of the bowel.

VEERABHADRA RADHAKRISHNA[1]
BIBEKANAND JINDAL[1]
BIKASH K NAREDI[1]
BHARATHI BALACHANDER[2]
NIVEDITA M[2]

Department of [1]Pediatric Surgery and [2]Neonatology, Jawaharlal Institute of Postgraduate Medical Education and Research, Puducherry, India

Corresponding Author: Dr Bibekanand Jindal
Email: drvjindal@gmail.com

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