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Case report

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Unusual case of intussusception in a Nigerian neonate

Summary

Intussusception is a common cause of intestinal obstruction in babies outside the neonatal period. It intussusception occurs typically at the ileocolic junction.

Prognosis of this condition is generally good, but a delay in diagnosis and management can lead to a higher morbidity and mortality.

The clinical syndrome is however different in neonates with a lot of them presenting with features similar to necrotizing enterocolitis. This atypical presentation results in a delay in diagnosis and poorer outcome in this group of patients.

Such is the case of our thirteen day old neonatal patient who presented late with features similar to those of necrotizing enterocolitis with delayed operative management resulting in severe sepsis and eventual death.

Keywords: intussusception, paediatric intussusception, neonatal intussusception, unusual case of intussusception, necrotizing enterocolitis

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Introduction

Intussusception is a common cause of intestinal obstruction in children aged 3 months to 6 years and a very rare disease in neonates.[1,2]

It is well known as a disease of babies outside the neonatal period.

This condition is however uncommon in the neonatal period, accounting for only 0.3% of all cases in this population and 3% of intestinal obstruction in them.[2,3]

Patients typically present with episodic abdominal pain and distension, vomiting, passage of blood in stool and a palpable abdominal mass.[3] The delay in diagnosis and surgical management can lead to a higher morbidity and mortality in neonates.[2,3] Outcome is usually good following early diagnosis.[3]

Intussusception is typically at the ileocolic junction in 80% of infants and children and occurs in the small bowel in less than 10% of cases in this population.[2] The pattern is however different in premature neonates where small bowel involvement is commoner.[1]

Although outcome if intussusception in neonates has improved over time, there is still a challenge in management of neonates because of the confusing clinical picture resulting in a delayed diagnosis and operative intervention and consequently, higher morbidity and mortality rate.[1,2]

Therefore a neonate with suspected Necrotizing Enterocolitis (NEC) with a less turbulent course than expected should have the possibility of an intussception entertained.[2,3] Such patient may benefit from an early surgical exploration to avoid bowel gangrene.

Case description

A thirteen day old female neonate presented with persistent fever of 11 days, progressively increasing abdominal distension of 5 days and passage of mucoid bloody stool of 2 days prior to presentation.

There was an episode of vomiting which was non billous. There was also irritability and refusal of feeds.

Baby was given herbal concoction and abdominal scarification marks before presentation.

Failure of symptoms to resolve after the home traditional intervention necessitated their visit to our facility 11 days later.

Pregnancy was booked at a primary healthcare center, mother had regular antenatal visits and her routine drugs. There was no history of maternal febrile illness or exposure to radiation during pregnancy.

Baby was delivered via emergency Ceasarean Section on account of preeclampsia and was on formula feeding due to poor lactation.

On examination, he was in obvious respiratory distress, febrile (38.4), pale, dehydrated anicteric and acyanosed. He was also tachycardic and tachypneaic.

Abdomen was mildly distended, soft moved with respiration, scarification marks in all quadrants, mild right lumbar tenderness with no guarding and a palpable mass in the right lumbar region.

Full blood count and electrolytes at presentation showed values within normal limits.

Assessment of NEC was made, to keep in view Intussusception.

Child was placed on intravenous fluids and antibiotics and close monitoring. He was also placed on CPAP on account of severe respiratory distress and poor Oxygen saturation. Ng tube was passed and effluent drained was billous.

Repeat investigations 2 days later showed leukocytosis (21.5x10^9/L), thrombocytopaenia (80000) and ureamia (8.5mmol/L)

Abdominal X-ray showed absence of gas on the right side of the abdomen and the pelvis as shown in Figure 1.

Figure 1 Plain abdominal xray showing absence of gas on the right side of the abdomen and the pelvis.

Parents were counselled and the baby was taken for laparotomy.

Findings at surgery include ileocecal intussusception with apex in the caecum with the involved bowel segment viable as seen in Figure 2 and an ileoileal intussusception with gangrenous ileal segment (Figure 3).

Figure 2 showing ileocecal intussusception.

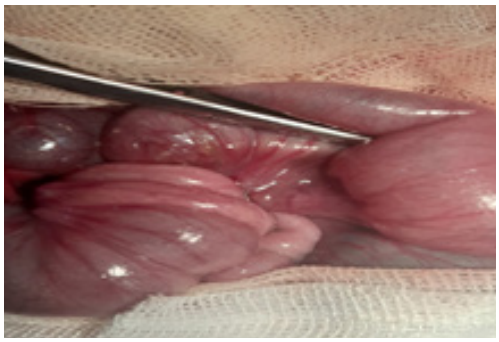

Figure 3 showing ileoileal intussusception.

There were also linear greenish patches on the antemesenteric border of small bowel away from the sites of the intussusception as seen in Figure 4.

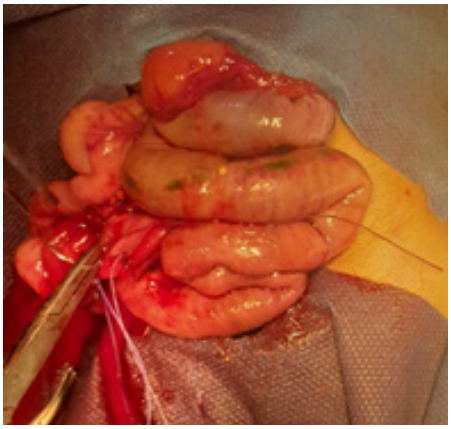

Figure 4 Ante-mesenteric linear greenish patches.

There was no pathologic lead point.

The gangrenous segment was resected and end to end ileo-ileal anastomosis was done, followed by copious peritoneal lavage with warm normal saline.

IV fluid and antibiotic therapy was continued post operatively.

In the post-operative period, multiple blood transfusions and change of antibiotics were done due to worsening sepsis and anaemia.

Unfortunately, we lost the patient on the 7th post-operative day due to severe sepsis and multiple organ failure.

Discussion

Intussusception is a common cause of intestinal obstruction in children aged 3 months to 6 years and a very rare disease in neonates.[1,2]

It is well known as a disease of babies outside the neonatal period, therefore outcome is usually good following early diagnosis.[3]

This condition is however uncommon in the neonatal period, accounting for only 0.3% of all cases in this population and 3% of intestinal obstruction in them.[2] Features are less classical in this age group and diagnosis is usually more difficult with features looking more like NEC.[2,3] The delay in diagnosis and surgical management can lead to a higher morbidity and mortality in neonates.[2,3]

Preoperative diagnosis intussusception is often difficult and rare in this group of patients.[4,5] As observed in our patient, most neonates don't present with the classical features of episodic abdominal pain, abdominal mass, and red currant jelly stools. The typical features in this age group are usually those feed intolerance, abdominal distension, bilious vomiting, and rectal bleeding; which are often confused with Necrotizing Enterocolitis (NEC).[3,6]

The delayed diagnosis of intussusception until Day 5 of admission in our patient was not uncommon, as reported by other reviewers, the classical features of intussusception are uncommon in neonates and most patients are initially diagnosed with NEC, resulting in delay in taking a decision to operate.[2,3] This leads to a delay in diagnosis and surgical management of the index patient, with a higher morbidity and eventual death of the patient.

The severe morbidity and eventual mortality of our patient can be attributed to the delayed diagnosis and surgical management.

Abdominal ultrasound scan is a useful tool in distinguishing between NEC and intussusception in a neonate.[3,4] In the index case, it was a significant factor in decision to operate as the clinical suspicion of intussusception was confirmed by ultrasound.

Ileocolic intussusception is seen in up to 80% of cases in infants and children and rarely it occurs in the small bowel in less than 10% of cases in this population.[2] Biarge[1] however reported a higher incidence of small bowel involvement (91.6%) in preterm neonates.

In our patient, there were multiple isolated intussusceptions with one occurring in the ileocecal region and the other occurring in the ileum. The occurrence of multiple sites of intussusception in our patient was surprising as it is quite a rare occurrence in neonates. Most of such cases found in literature were reported in adults and older children.[6–8]

Ahmed et al also reported an unusual case of ileoileal intussusception with gangrene in a 26 day old neonate who also had ileal resection and anastomosis.[9] Similar to our case, No pathologic leadpoint was found in their patient.

With improvement in neonatal surgical care, outcome if intussusception in neonates has improved over time. However, there is still a challenge in management of preterm neonates because of the confusing clinical picture resulting in a delayed diagnosis and operative intervention and consequently, higher morbidity and mortality rate.[1,2]

Therefore a neonate with suspected NEC with a less turbulent course than expected or who does not respond well to medical

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management should have the possibility of an intussusception entertained and should be considered for an early surgical exploration to avoid bowel gangrene.[2,3]

Conclusion

Intussusception is a common cause of intestinal obstruction in infants outside the neonatal period.

It is well known as a disease of babies outside the neonatal period.

Classical presentation is rare in neonates, resulting in delayed diagnosis and management with consequent increase in morbidity and mortality rate.

A neonate with suspected NEC having less severe clinical picture than expected should be evaluated for intussusception.

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Conflict of interest

The authors declare that they have no conflicts of interest.

Referencres

1. Martínez Biarge M, García-Alix A, Luisa del Hoyo M, et al. Intussusception in a preterm neonate; a very rare, major intestinal problem--systematic review of cases. *J Perinat Med*. 2004;32(2):190–194.
2. Prakash A, Doshi B, Singh S, et al. Intussusception in a premature neonate: A rare and often misdiagnosed clinical entity. *Afr J Paediatr Surg*. 2015;12(1):82–85.
3. Wang NL, Yeh ML, Chang PY, et al. Prenatal and neonatal intussusception. *Pediatr Surg Int*. 1998;13(4):232–236.
4. Tepmalai K, Naowapan T, Singhavejsakul J, et al. Intussusception in premature baby: Unusual cause of bowel obstruction and perforation. *J Neonat Surg*. 2017;6(1):13.
5. Al-Salem AH, Habash BM. Ileoileal intussusception: a report of 4 cases. *Ann Saudi Med.* 2000;20(3–4):310–312.
6. Slam KD, Teitelbaum DH. Multiple sequential intussusceptions causing bowel obstruction in a preterm neonate. *J Pediatr Surg*. 2007;42(7):1279–1281.
7. Hafen GM, Taylor A, Oliver MR, et al. Intussusceptions arising from two different sites in a child with cystic fibrosis. *Pediatr Pulmonol.* 2005;40(4):358–361.
8. Harris JP, Munden MM, Minifee PK, et al. Sonographic diagnosis of multiple small-bowel intussusceptions in Peutz-Jeghers syndrome: a case report. *Pediatr Radiol*. 2002;32(9):681–683.
9. Hassan A, Zain M, Ghazaly Y. Primary neonatal ileoileal intussusception. *J Pediatr Surg Case Rep*. 2019;42:18–20.

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