Acute intussusception in new born: A rare cause of intestinal obstruction

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Abstract

Neonatal intestinal obstruction is an acute emergency with varied etiologies. Neonatal intussusception is extremely rare. We report the case of a female preterm newborn, diagnosed with acute intussusception. She presented with abdominal distension and signs of intestinal obstruction. The clinical findings showed an intussusception at the ileocolic junction. Contrast enema was performed successfully to reduce the intussusception with success.

Keywords: Neonate, Intussusception, Neonatal intestinal atresia, Necrotizing enterocolitis.

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Introduction

The diagnosis of intussusception in neonates is difficult. It is less frequent than the other neonatal abdominal issues (Less than 1.3% of all cases of intussusception occur in term neonates). The clinical feautures show great similarities with necrotizing enterocolitis (NEC). Nevertheless this disease remains exceedingly rare in premature neonates. The intussusception is frequently located in the small bowel and the commonest site for same is usually ileoileal or ileocolic.

Case Report

A twenty six day old preterm neonate, result of dichorionic diamniotic twin pregnancy complicated with severe gestational hypertension, was born at 32 weeks' gestation with a birth weight of 1500 g. The Apgar score was 1, 5, and 6 at 1, 5 and 10 minutes respectively. Her twin sister weighed 1240 g at birth and died at day 3 by apnea. The infant had an immediate respiratory distress requiring Nasal continuous positive airway pressure (NCPAP). First meconium was passed before the end of the second day. Total parenteral nutrition was begun at birth. Five days later and the enteral feeding was administrated via nasogastric tube but quickly stopped because of an abdominal distension. At the day 20 of life, signs of intestinal obstruction were noted. The abdominal X-ray performed then has showed few dilated loops with no gas in pelvis. Abdominal ultrasound demonstrated the intussusception as an occluding mass prolapsing into the lumen, giving the "coiled spring" at the ileocolic junction. Contrast enema was performed to reduce the intussusception with success. Control abdominal ultrasound done one day late showed expansion of the last ileal loop which suggested an intussusception since the antenatal period. Postoperatively, the patient recovered, was advanced to normal feedings and normal stool pattern.

Figure 1. *Ultrasound image showing a length of intestine inside another length: A 'pseudo-kidney'.*

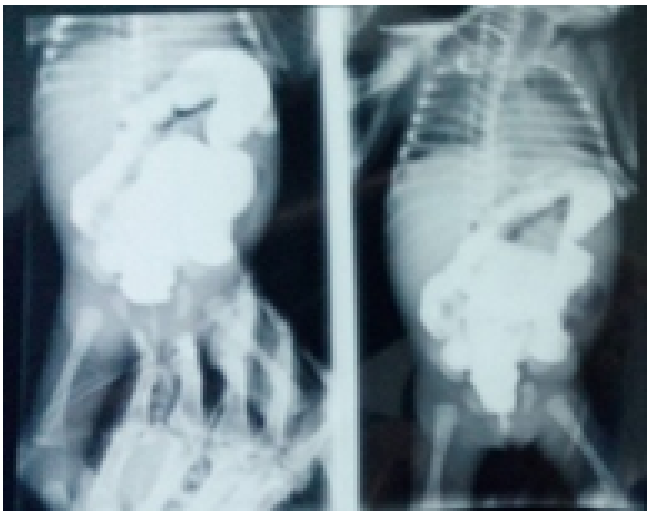

Figure 2. *Contrast enema in newborn.*

Discussion

Intussusception is a process in which a portion of intestine invaginates into itself. It is a rare etiology of neonatal intestinal obstruction since it occurs with an incidence of 0.3% to 1.3% in newborns [1]. It is exceedingly rare in premature neonates. This disease is more common in boys, with a ratio of 3:2. In most cases, the cause remains unclear. However, in full term neonate with intussusception, a lead point is present in approximately 58% of patients [2], such as duplication cyst, hamartoma, Meckel's diverticulum, or mesenchymoma. Neonates with intussusception typically present with abdominal distension, signs of intestinal obstruction such as bilious vomiting or nasogastric aspirate, and bloody stools. In premature neonates, it often is mistaken for necrotizing enterocolitis (NEC), which is a much more common disorder in this patient population [3]. Enteric vascular ischemia may be the common underlying cause of both diagnoses in premature neonates. The distinction can be difficult and often diagnosis was made intraoperatively. Thus,

the etiology and risk factors for neonate intussusception are not well understood. It is admitted that the severity and mortality of this disease are greater in preterm neonate with low birth weights. Abdominal radiography should help clinical suspicion without neither sensitivity nor specificity. It shows the same findings as in NEC. However, abdominal ultrasonography is more interesting. For ileocolic or colocolic intussusceptions, it has a sensitivity of over 98% and a specificity of 100%. It is less effective for detecting an ileo-ileal location. If doubt still exists regarding the diagnosis, a contrast enema should be performed in the ileocolic intussusception. This can be therapeutic as well as diagnostic. In premature neonate the use of contrast enemas appears to increase risk of perforation requiring often an emergent laparotomy in a second time [4]. Excepting late-presenting intussusceptions, generally the prognosis is good [5]. Recurrence is usually possible with a rate less than 5%.

Conclusion

Acute intussusception should be considered in all neonates with signs of intestinal obstruction. This entity is often misdiagnosed as NEC, delaying operative intervention. Early diagnosis may be achieved with use of ultrasound scan. Treatment is successfully with resection and primary anastomosis, achieving good results.

References

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