CASE REPORT

Unkinking the kinked: A rare intussusception in the paediatric emergency department

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Abstract

Intussusception is the introversion of the proximal intestinal loop into the distal downstream part of the intestinal loop, leading to gut wall oedema and restriction of blood supply. A high index of suspicion is required to diagnose it timely. Mostly infants aged less than a year are vulnerable to this surgical emergency presenting mostly with abdominal distension, vomiting, reluctance to feed and bright red jelly-like stools which, if left unrecognised, may result in the development of ischaemic portion of the gut and catastrophic outcomes. We present the case of a 60-day-old baby who presented in the Paediatric Emergency Department with progressive abdominal distension and bloody stools. Abdominal X-ray showed dilated bowel and ultrasound imaging showed a target sign positive for intussusception. The baby was rushed to the operating room (OR) due to delayed presentation, where an uneventful exploratory laparotomy was performed. Acute intestinal intussusception remains a cause of low morbidity and mortality rates if recognised earlier.

Keywords: paediatric surgical emergency, colo-colic intussusception, target sign on ultrasound.

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Introduction

Intestinal obstruction due to intussusception is the most frequent cause of acute abdominal emergencies in children, usually up to five years of age and is seen predominantly in males. However, it is rarely seen in infants below the age of six months in both European and Asian countries.[1-3] It is defined as telescoping of one segment of the bowel over another. The aetiology remains idiopathic or poorly understood.[4] Intussusception can be a potentially life-threatening or even lethal condition, if not diagnosed timely.[5] The diagnosis is made on clinical grounds and with the aid of radiological findings. The classical symptoms include crying episodes of child with knee flexed, stool mixed with blood and mucus, greenish vomiting, abdominal mass, diarrhoeal episodes and lethargy. When suspected, diagnosis can be confirmed by ultrasonography.[6] Treatment modalities can be both surgical and non-surgical, depending upon the clinical assessment by paediatric surgeons.[7] We present an unusual case report of intussusception that we encountered in the paediatric emergency of Indus Hospital and Health Network, Karachi on February 16, 2022; our patient is a two-month-old male infant who was diagnosed with this catastrophic surgical emergency, not only his presentation but also the correct diagnosis was challenging, as intussusception is not commonly seen in infants below six month of age. Furthermore, the operative finding of colo-colic intussusception is not reported in infants, yet alone without pathological lead point.

Case Report

A two-month-old male infant, previously a healthy child, was brought to the emergency department of Indus Hospital and Health Network, Karachi on February 16, 2022 with complaints of progressive abdominal distention over four days. The child initially had bloody diarrhoeal stool which resolved by taking treatment from a nearby primary health care facility, two days later the child refused to take feed and started to develop abdominal distention and on the day of arrival to our emergency department he had developed non-projectile bilious vomiting episodes. On examination, the child looked sick and lethargic, and had a distended abdomen with audible gut sounds. On rectal exam, currant jelly-like stool was seen. A nasogastric tube was passed and fluid resuscitation was started. Bedside point-of-care blood glucose and labs including complete blood count and serum electrolytes were sent. Portable x-ray for abdomen was done which showed dilated bowel loops (Figure-1). A nasopharyngeal swab for COVID-19 antigen detection was also done as per hospital policy for all patients on admission. The child was taken to radiology department, where ultrasonography showed a target sign indicative of intussusception (Figure 2). Paediatric surgeon was taken on board and due to the frail condition of the child and delayed presentation, the child was shifted to the operating room (OR) immediately. All blood workups and COVID-19 antigen tests were unremarkable.

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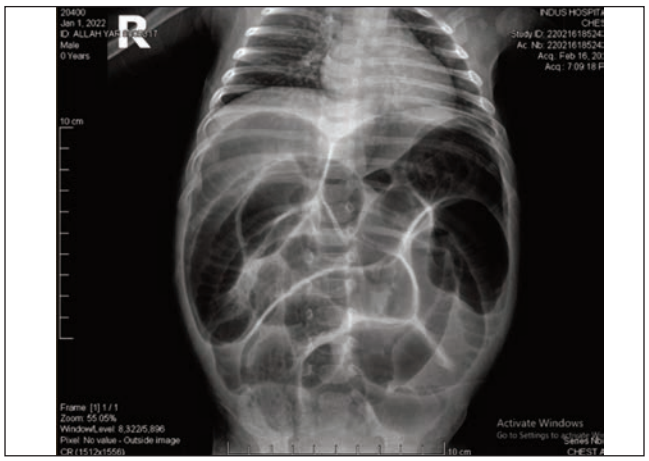

Figure-1: Plain radiograph with dilated bowel loop.

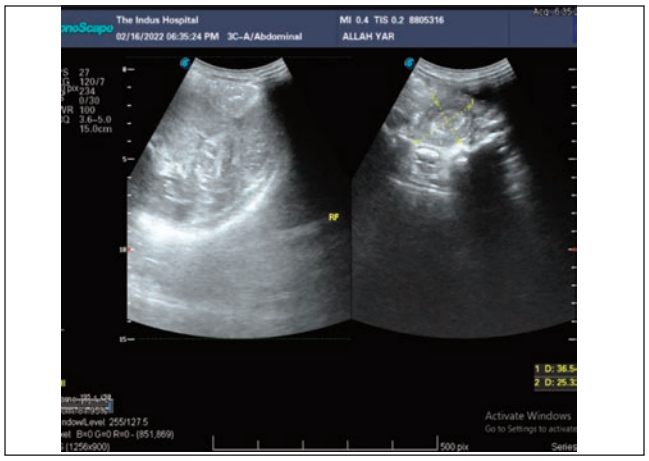

Figure-2: Ultrasonograph with target sign.

Since our patient was a two-month-old infant which is not a common age for intussusception and his presentation to emergency was delayed, the general impression of an acute abdomen was made which can be due to invasive diarrhoea, sepsis, enteric fever complication, infectious colitis and might not warrant operative intervention, but timely identification of target sign on ultrasonography and rushing the patient to OR resulted in desired outcome.

The operative procedure was uneventful. Per-operative, the finding was colo-colic intussusception and no pathological lead point was identified. The child remained well throughout the hospital stay, was allowed feed orally on the second post-operative day and hence discharged.

After two weeks, the child was called for follow-up in the paediatric surgery clinic and was noted to be well. No post procedure complications were observed.

Discussion

This infant's case highlights the delayed presentation of a potentially preventable lethal condition due to rarity of the age defined in the textbooks for intussusception. Though some cases have been reported at less than six months of age with intussusception, the literature is scarce. Moreover, no case of colo-colic intussusception was identified in those below three months of age.

The baby did not have the typical signs and symptoms and did not fall in age range for paediatric intussusception, which caused a delay in diagnosis and management.

Intussusception is reported to be idiopathic, only in less than 10% of cases, an identifiable cause is reported. It is noted to be associated with viral illnesses, like Covid-19, after a routine dose of the Rota Virus vaccine, many patients have preceding flu like illnesses; none of the conditions were present in our patient.[8,9]

Intussusception can occur at any portion of the small and large intestines. The small intestine, due to high mobility, is the most frequent site for intussusception. In Asian and European populations, it is reported to be ileocolic (80%) followed by ileo-ileal and Colo-colic.[10,11] For colo-colic intussusception, a pathologic lead point like a polyp or even a tumour is usually a causative agent; for this very reason colo-colic intussusception is seen mostly in adults and can be missed in the paediatric population.[11] Per-op findings for our patient were negative for any pathologic lead point to be the cause of intussusception.

Conclusion

Intussusception in infants below 6 months of age is not seen frequently, based on our experience, we recommend keeping a high index of suspicion for such children, who present with gastroenteritis, abdominal pain, or refusal to feed. Bedside ultrasonography is shown to be a useful investigation. If such patients present in primary health care set-up then, early referral to tertiary care hospital should be made. Early diagnosis might prevent catastrophic conditions.

Note of Consent: Consent was taken from the patient's parents to publish the case.

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Conflicts of Interest: None.

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