

Appendix around Ileocolic Intussusception with Acute Appendicitis: A Rare Presentation

Reddy Ravikanth*

Department of Radiology, St. John's Hospital, Kattappana, Kerala, India

Abstract

Intussusception and appendicitis share similar clinical features. However, their concurrent occurrence is exceedingly rare. Appendix involvement in intussusception must be ruled out when appendix is not visualized on high-resolution ultrasonography in cases with ileocolic intussusception. This case report describes the sonological appearance of a combination of ileocolic intussusception with concurrent acute appendicitis in a 4-year-old child.

Keywords: Acute appendicitis, ileocolic intussusception, ultrasonography

INTRODUCTION

Intussusception and appendicitis share similar clinical features. The combination of acute appendicitis together with intussusception in children is exceedingly rare. The role of ultrasonography is essential for early diagnosis and prompt treatment of the entity which helps prevent severe complications such as peritonitis, subsequent sepsis, and shock.

CASE REPORT

A 4-year-old boy presented with severe pain in the right lower abdomen which had an insidious onset for 36 h. Pain was associated with 4–5 episodes of vomiting and mild fever. Clinical examination revealed tenderness in the right subhepatic region with suspicion of a mass and was subsequently referred for imaging. Transabdominal ultrasonography revealed severe probe tenderness and a target sign in the right subhepatic region. The finding was consistent with ileocolic intussusception [Figure 1a]. Further imaging findings included circumferential encasement of the receiving intussusciens segment by the dilated appendix with surrounding echogenic fat and fluid. The findings were consistent with features of acute appendicitis [Figure 1b]. On ultrasonography, there were no findings of inverted appendix protruding into the cecal lumen, hence ruling out the possibility of appendiceal

intussusception. A sonological diagnosis of appendix around ileocolic intussusception with features of acute appendicitis was made, and the child was referred to the department of general surgery for further management. Laparotomy was performed which confirmed ultrasonography diagnosis. Ileocolic intussusception was reduced, and appendicectomy was performed for the acutely suppurative appendix.

DISCUSSION

A combination of acute appendicitis and ileocolic intussusception is a rare occurrence, and acute appendicitis is the most common entity requiring urgent emergency surgical exploration in children. Ultrasonography has high sensitivity in diagnosing intussusception, and the presence of a target sign clinches the diagnosis with precision.^[1] Acute appendicitis is an uncommon entity in children below 5 years of age and constitutes 5% of all appendicitis cases.^[2] Identification of lead point in ileocolic intussusception is an uncommon finding in children below 5 years of age.^[3] The peak incidence of these two entities is different, with intussusception being rare in children over 2 years and acute appendicitis being very rare

Address for correspondence: Dr. Reddy Ravikanth,
Department of Radiology, St. John's Hospital,
Kattappana - 685 515, Kerala, India.
E-mail: ravikanthreddy06@gmail.com

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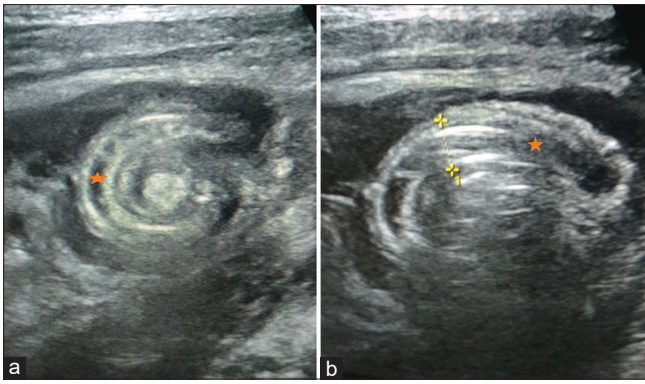


Figure 1: (a) High-resolution ultrasonography image demonstrating target sign consistent with bowel-in-bowel appearance of ileocolic intussusception. Note the prominent appendix (star) encircling the segment of the intussusceptum. (b) High-resolution ultrasonography image demonstrating a dilated appendix (star) with adjacent echogenic fat and surrounding fluid consistent with features of acute appendicitis

in children under 3 years of age.^[4] There is high possibility of one entity being overlooked if another is suspected. Therefore, it is important to consider the possibility that both conditions may coexist while making a diagnosis in a child. Concurrent occurrence of intussusception and acute appendicitis may be either due to intussusception causing strangulation and inflammation of the appendix or the inflamed appendix acting as a lead point for ileocolic intussusception.^[5] Ultrasonography is the modality of choice for the diagnosis of intussusception and its bowel complications or for the identification of lead point.^[6] Appendix involvement in intussusception must be ruled out when appendix is not visualized on high-resolution ultrasonography in cases with ileocolic intussusception.^[7]

CONCLUSION

This case report describes the sonological appearance of a combination of ileocolic intussusception with acute

appendicitis and stresses on the fact that radiologists and sonologists need to be aware of such a rare occurrence, especially in children, as both intussusception and acute appendicitis warrant urgent evaluation and prompt treatment.

Declaration of patient consent

The author certifies that he has obtained all appropriate patient consent forms. In the form, the legal guardians have given their consent for images and other clinical information to be reported in the journal. The legal guardians understand that patient's name and initials will not be published and due efforts will be made to conceal the identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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