

C.-C. Luo · C.-R. Wang · C.-H. Chiu

Intussusception and intestinal malrotation in an infant: a case report

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Abstract An abnormal cecum position is usually found in patients with intestinal malrotation. We report one case with intussusception and intestinal malrotation in a 10-month-old infant. An unusual radiologic imaging feature and also abnormal intussusception mass location are discussed.

Keywords Intussusception · Malrotation · Air enema reduction

Introduction

Intussusception is a frequent cause of bowel obstruction in infants and toddlers. The classical finding on abdominal examination or laparotomy of infants with intussusception is a sausage-shaped mass in the right lower quadrant (RLQ) area. Abnormal cecum position is usually found in patients with intestinal malrotation. The purpose of this report is to document a rare combination of intussusception and intestinal malrotation and to discuss the unusual radiologic imaging and the therapeutic problems posed by this situation.

Case report

A previously healthy 10-month-old first born boy presented with vomiting and recurrent episodes of crying for 1 day. He had become progressively lethargic prior to the admission to the emergency room. On examination, he was well nourished but apathetic, in obvious discomfort and was moderately dehydrated. His abdomen was mildly distended and tender without



Fig. 1 Unsuccessful air enema reduction demonstrates an intussusception mass over the left middle area of the abdomen (*arrowhead*)

rebound pain. A suspected palpable mass was found over the mid-abdomen. Plain abdominal X-ray showed bowel distention. Ultrasonography was done under the impression of intussusception. Air enema reduction of the intussusception was attempted, but unfortunately was unsuccessful. The abnormal location of the intussusception mass was encountered on the air enema X-ray (Fig. 1).

A right supraumbilical transverse incision was done. The intussusception sausage mass was not found over the RLQ area. The whole small intestine was located over the right abdomen. The wound was extended and we traced the terminal ileum to find the intussusception over the left upper quadrant area. Milking reduction was done successfully, and Ladd's procedure was also performed to correct malrotation. The patient recovered uneventfully.

C.-C. Luo (✉) · C.-R. Wang · C.-H. Chiu
Department of Pediatric Surgery Radiology and Pediatrics,
Chang Gung Children's Hospital and College
of Medicine Chang Gung University,
5 Fu-Hsin Street Kweishan,
333 Taoyuan, Taiwan
E-mail: lifen@adm.cgmh.org.tw

Discussion

Intussusception is a relatively common entity in childhood and management of infants with intussusception is initially non-surgical. [1]. Hydrostatic reduction of intussusception by barium or air enema has been widely accepted and surgery is advised only when non-surgical therapy fails. Laparotomy is done through a right transverse incision immediately above the umbilicus as the intussusception mass is usually easily found through this approach.

The term intestinal malrotation embraces any condition resulting from interference with the process of orderly rotation of the fetal midgut and the normal fixation of the mesenteries and there are various degrees of instability [2]. A common variety of malrotation is with the duodenojejunal flexure to the right of the midline in association with mobile cecum and therefore the position of terminal ileum and cecum was different from the normal patient. It must be remembered that occasionally malrotation may simulate intussusception on barium enema [3] and rare cases of simultaneous malrotation, volvulus and intussusception have been described [4].

Hydrostatic barium or air enema reduction are still effective methods for treatment of infants with intussusception and intestinal malrotation. The abnormal intussusception mass location on radiologic feature as in our case will suggest the possibility of a significant degree of intestinal malrotation. If radiologic reduction was unsuccessful, laparotomy must be performed, then the incision planned so as to allow inspection of the position of the duodenojejunal flexure and intussusception mass should be considered by the surgeon, also, Ladd's procedure and reduction of intussusception should be done simultaneously.

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