Abstract:
Pediatric surgical diseases may present in a delayed fashion to the emergency department. In addition, these cases may have abnormal presentations when compared with presentations in the setting of the neonatal intensive care unit. A high degree of suspicion on the part of emergency physicians will allow for prompt and definitive consultation and treatment of our youngest patients. Here we present 3 such cases that were encountered in our emergency department that show the importance of a high index of suspicion.

Keywords:
malrotation; volvulus; Hirschsprung disease; patent ductus arteriosus

Neonatal "Near Misses" Encountered in the Emergency Department

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Neonatal surgical "near misses" that present to the emergency department (ED) must be recognized early and treated promptly. Frequently, the presenting symptoms are difficult to assess or are absent in infants and neonates, leading to misdiagnosis or delay in diagnosis. Here we discuss 3 pediatric surgical cases presenting to our ED. The first case is a 1-week-old with an intestinal malrotation with midgut volvulus. The second case is an older infant with delayed diagnosis of Hirschsprung disease. The third case is a 7-week-old infant with failure to thrive and congestive heart failure secondary to a patent-ductus arteriosis.

CASE 1

A female infant was born at 40 weeks gestation via an uneventful cesarean delivery with a birth weight of 3.3 kg. During the first week of life, the mother reported poor feeding and persistent nonbilious vomiting. The baby presented to the ED at 1 week of life with significant weight loss and with the following vital signs: heart rate, 126 beats/min; respiratory rate, 44 breaths/min; temperature, 36.7°C; blood pressure, 83/60 mm Hg; and weight, 3.17 kg. On physical examination, the baby was alert and active and had moist mucus membranes, heart and breaths sounds were normal, and the upper abdomen was distended with bowel loops palpable. An

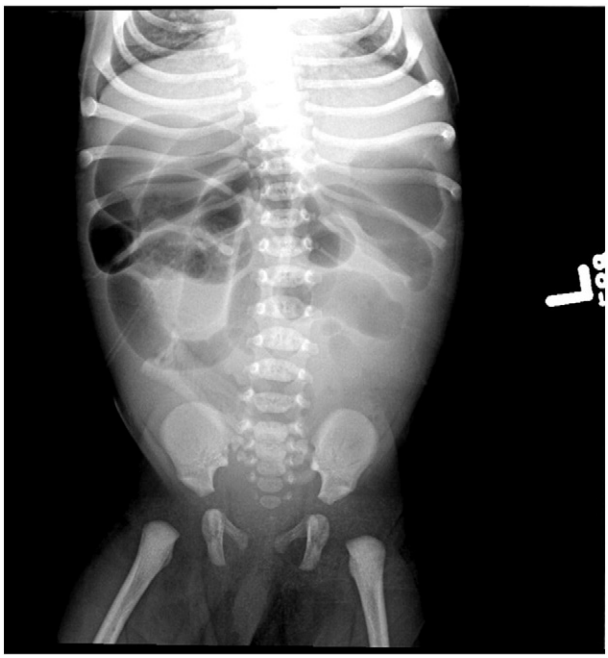

Figure 1. Supine abdominal radiograph demonstrating multiple distended loops of small bowel consistent with intestinal obstruction.

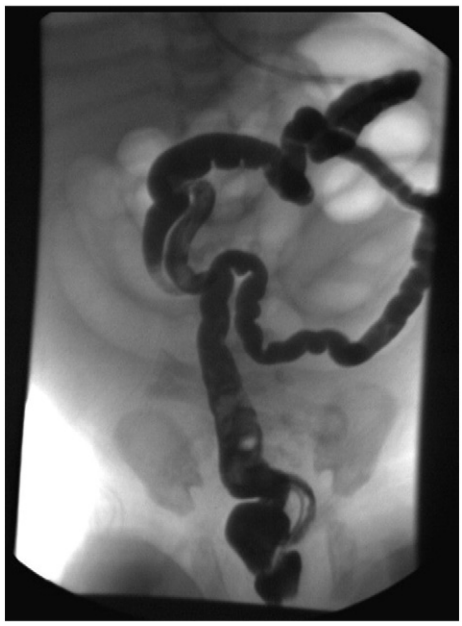

Figure 2. Contrast enema in the same patient as Fig. 1. Displaced cecum in the right upper quadrant is concerning for malrotation.

abdominal x-ray was obtained showing dilated proximal small bowel concerning for proximal intestinal obstruction (Figure 1). A barium enema was then conducted demonstrating a displaced cecum in the right upper quadrant. Despite the absence of bilious emesis, these findings were concerning for intestinal malrotation (Figure 2). Pediatric surgery was consulted, and the patient was taken emergently to the operating room for exploratory laparotomy. At surgery, the baby was noted to have Ladd's bands extending from the right colon across the duodenum to the lateral abdominal wall and malrotation with volvulus. The small bowel was viable at the conclusion of surgery. The baby began oral feeds on postoperative day 7 and discharged home soon thereafter with normal bowel movements.

INTESTINAL MALROTATION

Intestinal malrotation is a congenital anomaly of intestinal rotation.[1] Intestinal obstruction may occur if cecal (Ladd's) bands are present or if midgut volvulus arises, which is a twisting of the mesentery leading to ischemia and possibly necrosis and perforation. In one series, 80% of patients presented in the first month of life, with bilious emesis (97%) being the primary symptom.[2] They further report that most of these patients had prior contact with health care professionals that may have resulted in an earlier diagnosis and treatment, if malrotation had been in the differential diagnosis.[2]

CASE 2

A 39-week gestational age boy was born via spontaneous vaginal delivery with a birth weight of 3.9 kg. The baby had a medical history of ABO incompatibility, term large for gestational age, poor feeding, and maternal chorioamionitis. The baby passed meconium on the first day of life and was having 4 yellow-seedy bowel movements per day at discharge. The infant was in his normal state of health, being breast-fed with formula supplementation, until 7 weeks of life. At 7 weeks of age, he presented with his mother to an urgent care facility for a several day history of constipation. The mother reported using apple juice as a laxative with minimal relief. The urgent care facility gave a suppository, and a small hard pellet of stool was expressed with abdominal straining. He was released with the recommendation of 1 oz of apple juice with 1 oz of water twice a day. Four days later, the baby was taken to the ED for a 4-day history of having no bowel movements, poor feeding, and abdominal straining. An abdominal x-ray was obtained showing distention of the large and small bowel (Figure 3). Pediatric surgery was consulted for the constipation, and a barium enema was performed (Figure 4). The barium enema showed no transition point or stenotic bowel. Despite appropriate passage of meconium and