

Enteric Intussusception Presenting as a Rapidly Enlarging Mass

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Enteric intussusception is unusual in adults and frequently presents in a confusing manner. A case of jejunojejunal intussusception is presented in which a 15-cm abdominal mass developed in 24 h. The plain film, barium, and ultrasound findings in enteric intussusception are stressed.

INTRODUCTION

Intussusception is a common and well-recognized entity in infants and young children. However, adults account for only 5% of cases and frequently present in bizarre ways resulting in a delayed or incorrect preoperative diagnosis (1, 2). Multiple radiological procedures including plain films, barium studies, ultrasound, and CT may be helpful in evaluating such patients. Herein we present a case of jejunojejunal intussusception in which a large abdominal mass developed within 24 h.

CASE REPORT

A 27-yr-old black woman presented to our hospital complaining of increasing abdominal pain. She had been in good health until 4 months before admission when she developed crampy epigastric pain, nausea, emesis, and substernal burning. Bowel movements decreased to one per week. Outside laboratory evaluation, upper gastrointestinal series, and barium enema were normal.

Symptoms persisted resulting in a 15-lb weight loss and a short-term hospitalization during which her symptoms abated. A few weeks later she was readmitted with severe periumbilical pain. Physical examination was negative except for epigastric and lower abdominal tenderness.

Laboratory studies were negative other than a white blood cell count of 14,700 with 79% segmented and 4% band forms. Stool for occult blood was negative. During a 24-h period in the hospital a 15-cm, tender, mid-abdominal mass developed accompanied by nausea and bilious emesis. Plain films of the abdomen

showed a large soft tissue mass with no gas within it and a proximal small bowel obstruction (Fig. 1). Ultrasound revealed a mass containing multiple concentric hypoechoic rings alternating with echogenic rings (Fig. 2). The single contrast barium enema showed lateral displacement of the descending colon and inferior displacement of the distal ileum by the mass. Orally administered barium demonstrated total obstruction of the proximal small bowel with tapering of the jejunum at the point of obstruction (Fig. 3).

At surgery the mid-small bowel was noted to be edematous and ischemic with distention of the proximal small bowel (Fig. 4). The intussusception could not be manually reduced. Approximately 8 feet of jejunum



FIG. 1. The KUB shows a large soft tissue mass (curved arrows) with dilated small bowel proximally (straight arrow).

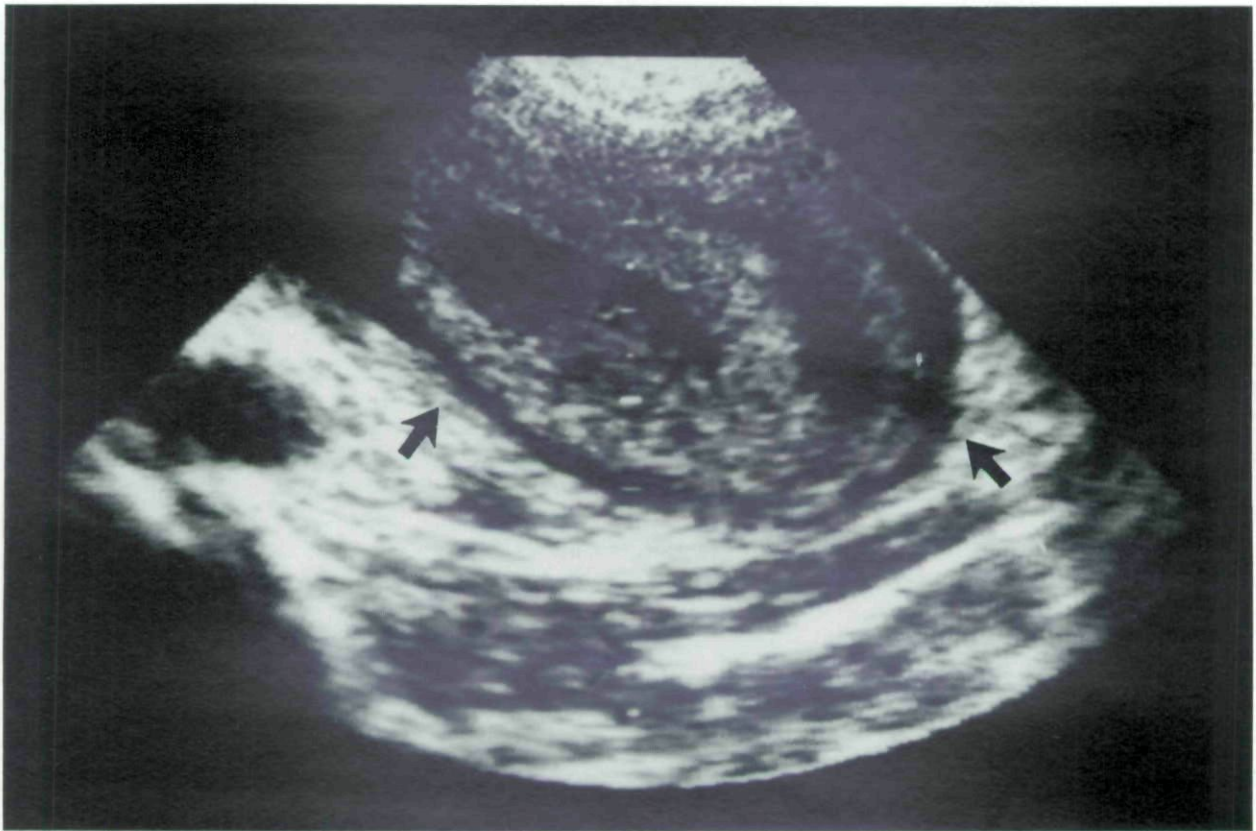


FIG. 2. The ultrasound study demonstrates a mass (outlined by *arrows*) containing multiple concentric hypoechoic and echogenic rings.

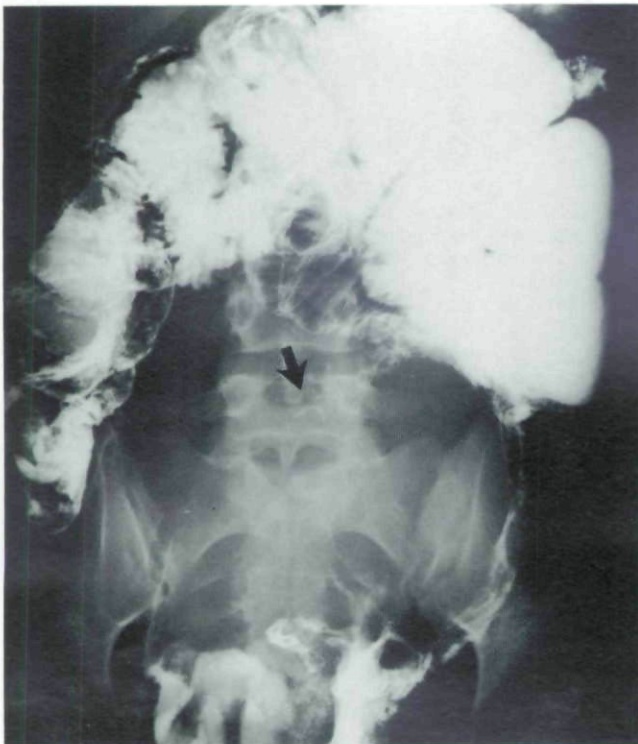


FIG. 3. Total obstruction of the jejunum (*arrow*) demonstrated by orally administered barium. There is residual barium in the colon from the barium enema which nicely outlines the mass.



FIG. 4. Marked distention of the proximal small bowel as seen at surgery.

was resected. No abnormality was found to account for the intussusception. The postoperative course was uncomplicated.

DISCUSSION

Intussusception accounts for 80 to 90% of intestinal obstructions in infants and is therefore considered with a high degree of suspicion in the proper clinical setting (3). The infant typically presents with the acute onset of crampy abdominal pain. An abdominal mass is usually palpable and the infant may pass currant jelly stools which consist of blood and mucus.

Adults present in a more varied fashion with symptoms commonly present for months or years. Symptoms of intermittent, partial small bowel obstruction predominate. A mass is palpable in less than 50% of cases (1, 4). Thirty-eight percent of adults have blood in the stool compared to 73% in infants and children (4).

While the majority of intussusceptions in infants involve the ileocecal region and have no underlying cause the location is varied in adults and an underlying abnormality can usually be demonstrated. Enteric intussusceptions account for 39% of cases in adults but only 4% in infants and children (4). Stubenbord and Thorbjarnarson (1) reported 25 cases of small bowel intussusception with all but six having a lesion accounting for the intussusception. Most lesions were benign including lipomas, adenomatous polyps, hemangiomas, a neurofibroma, carcinoid, and leiomyoma. Malignant entities included carcinoma, leiomyosarcoma, and lymphoma (1).

Since clinical and laboratory evaluation are unreliable in diagnosing intussusception in adults radiology must play an important role. Unfortunately radiographic findings may also be confusing. The reliability of plain film findings has been controversial ranging from less than 50 to 90% ability to make the correct diagnosis (5, 6). These studies are predominantly in children with ileocolic intussusception. Extrapolation to jejunojejunal intussusception in an adult is probably not possible. Nevertheless plain film findings that should be looked for include a soft tissue mass and mechanical small bowel obstruction. White and Blane (7) emphasize the need to do a horizontal beam radiograph of the abdomen as well as a supine view since the mass is frequently only seen on an upright or decubitus view.

Orally administered barium may be helpful in making the diagnosis but should only be given after an unprepped barium enema has been performed to rule out colonic obstruction. The coil-spring pattern which is typically associated with intussusception is not seen when barium is given orally unless obstruction is in-

complete and barium can pass through the intussusception. In cases such as the one presented herein only the central canal of the intussusception fills and the small bowel rapidly tapers to a point (8, 9). In our case there was no lead mass, but even when one is present it is usually not demonstrated on the barium study.

Ultrasound may be very helpful, as in this case, where it suggested an intestinal etiology for the mass. The typical appearance of intussusception by ultrasound is a "target-like" lesion. The sonolucent periphery of the lesion is due to edematous bowel wall and the central echogenicity is due to luminal interfaces (11).

CT was not performed but may be helpful in making a preoperative diagnosis. The thick-walled, distended intussusciens is seen containing the intussusceptum. The intussusceptum is off-center due to the mesentery which also invaginates. The mesentery is seen as a crescent-shaped low attenuation area within the intussusciens (12).

This case is unusual for several reasons including the rapid growth of the mass and the lack of an identifiable cause. It further demonstrates the varied presentation of enteric intussusception in adults. The utilization of ultrasound and CT offer the potential for more frequent preoperative diagnosis.

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