

# **PEM GUIDE - INTUSSUSCEPTION**

## **INTRODUCTION**

Intussusception is the most common cause of intestinal obstruction in children less than 2 years of age. Peak incidence is between 3 months and 1 yr with 80% of cases occurring < 2yrs of age.

Intussusception occurs when a segment of bowel “telescopes” into another. Ileocecal intussusception is most commonly described. Lymphoid hyperplasia (Peyer’s patches) is the etiology most commonly proposed. In older children and in those with recurrence a pathologic “lead point” may be present. These include, intestinal polyps, Meckels diverticulum, tumors (eg lymphoma) and intestinal duplications. The colitis associated with Henoch Schonlein Purpura is a distinct risk factor for intussusception.

## **CLINICAL MANIFESTATIONS**

History and physical examination findings are often nonspecific. History should focus on gastrointestinal symptoms. There may be a prodrome of gastroenteritis making it difficult to distinguish the two entities. There typically is a history of paroxysmal, crampy abdominal pain with infants drawing their legs up. Bilious vomiting and lower gastrointestinal bleeding are late findings. The classic “currant jelly” stools occur in less than 50% of cases. It has been reported that intussusception can present with mental status changes. Classically, this takes the form of alternating periods of lethargy and irritability. On physical exam, a sausage shaped mass can sometimes be palpated in the right upper quadrant. A stool exam for blood may or may not be positive.

## **DIAGNOSTIC IMAGING**

Abdominal radiographs may be helpful to rule in the diagnosis of intussusception though it should be remembered that the most common finding is that of “non-specific bowel gas pattern” and the XRAY may not be used to rule out intussusception. An XRAY may reveal signs of obstruction or that of a soft tissue mass. Specific findings include: absent liver edge sign (soft tissue mass in the RUQ), target sign (intussuceptum seen in a transverse plane) and crescent sign (the head of the intussusception). Recent evidence suggest that the presence are air in the ascending colon on a three view XRAY series (prone, supine and lateral decubitus) may effectively rule out intussusception.

Ultrasound has been found to be accurate in the diagnosis of intussusception. In the transverse cut, one can see a ring of bowel within bowel giving it a donut appearance. The longitudinal appearance on ultrasound has been reported as having a submarine sandwich or pseudokidney appearance with multiple layers. A negative ultrasound by an experienced radiologist may limit the need for a contrast enema.

## **MANAGEMENT**

Operative exploration/reduction is indicated if: the patient exhibits signs of peritonitis or perforation, failed hydrostatic reduction or suspicion of a pathologic lead point (older patients, multiple recurrences.)

A contrast enema has the benefit of being both diagnostic and therapeutic. Air enemas decrease the risk of contrast material peritonitis in the case of perforation with similar success. Success rates for hydrostatic reduction of intussusception via enema have been reported as high as 80-90%. Successful reduction is indicated by flow of air into proximal bowel. Patients should be admitted after successful reduction for observation. Complications include: perforation, partial reduction, reduction of a necrotic segment of bowel and missing a pathologic lead point. A surgeon should be available immediately in case the bowel becomes perforated during the procedure or the reduction is unsuccessful.