

Intussusception

Intussusception is the most common cause of intestinal obstruction in children between the ages of 3 months and 3 years. It is more common in boys and presents with episodic abdominal pain along with diarrhea. Patients have characteristic red, currant jelly stools, while physical exam findings can include a sausage-shaped mass. Conservative treatment of this disorder involves air or hydrostatic enema, while surgical reduction may be done for complicated or refractory cases, as this is a potentially life threatening issue.



PLAY PICMONIC

Assessment

Episodic Abdominal Pain

Episode causing Abdominal Pain-bolt

Episodic abdominal pain is caused by the process of one segment of the bowel telescoping into another segment during intestinal peristalsis. While telescoping is most often idiopathic in nature, a Meckel diverticulum, viral infections, and the rotavirus vaccine can all cause lead points for telescoping. It is painful because this telescoping results in ischemia.

Diarrhea

Toilet

Patients are irritable and have diarrhea with intussusception, especially if associated with other intestinal pathologies.

Sausage-Shaped Mass

Sausage

On physical exam, these children can have a "sausage-shaped" mass, which is typically found in the right upper quadrant (RUQ). Furthermore, there is no fullness in the bowel, and there is an empty right lower quadrant (RLQ), otherwise known as "Dance's sign." On ultrasound, which is a reliable screening tool in low-risk patients, this mass may be seen as concentric echogenic bands formed by mucosa and muscularis alternating with hypoechoic bands formed by submucosa, otherwise described as "target sign," "doughnut sign," or "bull's eye sign."

Red Currant Jelly Stools

Red Jar of Jelly on Stool

With the telescoping that occurs in intussusception, arterial blood flow stops, leading to ischemia and pouring of mucus into the intestine. Venous engorgement also occurs, and together these processes form a mix of blood, mucus, and stool typically described as "red currant jelly stools."

Considerations

Air or Hydrostatic Enema

Air and Hydra-static with Enema-Emma

A conservative management technique involves air or hydrostatic enema. An air enema is performed by instilling air into the colon via catheter until it becomes so full that the telescoped bowel is pushed back into a normal position. A hydrostatic enema can be performed by instilling a crystalloid solution into the bowel and has a similar effect. Barium enemas are typically avoided as they can cause peritonitis if bowel perforation occurs.

Surgical Reduction

Surgeon with scalpel

If other conservative treatments are unsuccessful, the child may require surgical intervention. Here, the invagination (telescoping) is manually reduced, and nonviable intestine is resected. This is typically done laparoscopically.