

RADIOLOGY CASE OF THE MONTH

Intussusception in Adults: Is There a Lead Point?

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A 36-year-old woman presents to the emergency department with a 4-day history of progressive lower abdominal pain accompanied by nausea.

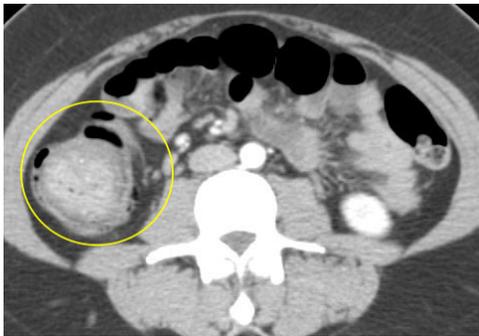


FIGURE 1



FIGURE 2

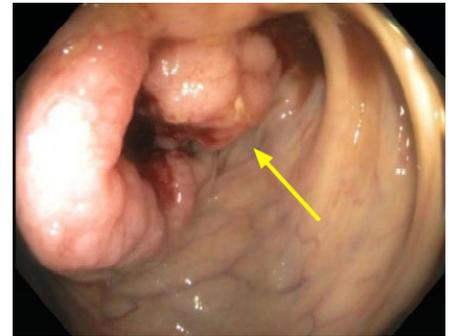


FIGURE 3

IMAGING FINDINGS

Figures 1 and 2: Axial and sagittal contrast enhanced computed tomography (CECT) at the level of the ileocecal region demonstrate a target-like appearance of the proximal ascending colon, with amorphous hyperdense central components (yellow circle), concerning for a mass. Figure 3 represents an image taken at colonoscopy which reveals an enlarged and exophytic friable mass (yellow arrow) occupying most of the cecal circumference at the level of the ileocecal valve.

What is your diagnosis?
Elucidation is on page 27.

RAIOLOGICAL DIAGNOSIS: Proximal ascending colonic intussusception secondary to a large exophytic mass.

CASE REPORT

A 36-year-old woman with no significant past medical or family history who presents to the emergency department with a 4 day history of progressive lower abdominal pain. Initial CECT revealed a target-like appearance of the proximal cecum with associated edema and adjacent mesenteric lymphadenopathy. Colonoscopy was performed and an exophytic lesion was identified with pathology concerning for malignancy. Patient underwent laparoscopic right hemicolectomy with final pathology reporting moderately differentiated invasive adenocarcinoma.

DISCUSSION

Intussusception is the invagination of a bowel loop with its mesenteric fold (intussusceptum) into the lumen of a contiguous portion of bowel (intussusceptans) as a result of peristalsis. It is a common cause of abdominal pain in the pediatric population that often requires surgical management. Approximately 5% of cases occur in adults and it accounts for 1% of all bowel obstructions. It is particularly important to rule out serious underlying disease such as an intraluminal neoplasm acting as a lead point in the adult population.

By imaging, intussusception can be divided into cases caused by a lead point versus non-lead point. Lead point intussusceptions can be further classified into benign vs. malignant etiologies. Benign causes include lipoma and adenomatous polyp. Malignant causes include adenocarcinoma, lymphoma and metastasis. Another major classification is by anatomical location, such as enteroenteric, ileocolic, ileocecal, or colocolic.

Non-lead point intussusceptions are assumed to be secondary to dysrhythmic peristalsis and are commonly seen in patients with inflammatory bowel disease.

Clinically, intussusceptions without a lead point are often asymptomatic and usually an incidental finding. Cases are usually transient, resolving spontaneously without need for treatment. In contrast, intussusceptions with a lead point usually present with vague and atypical abdominal pain. Associated symptoms may include nausea, vomiting, constipation, hematochezia, and weight loss. These cases can progress to overt bowel obstruction and surgical treatment is often required.

Radiographically, the presence of a bowel-within-bowel configuration with or without mesenteric fat and mesenteric vessels on computed tomography (CT) imaging is pathognomonic for non-lead point intussusception.

Imaging diagnosis of lead point intussusception is less straightforward given the overlapping of many factors including the configuration of the lead point, degree of bowel wall edema and amount of invaginated mesenteric fat. It can appear as an abnormal target-like mass with increased diameter with or

without associated proximal bowel obstruction. Differentiation of the lead mass from bowel wall edema on CT is generally easier with large bowel intussusceptions than with small bowel intussusceptions due to the greater caliber of the colon. In most cases, it is very difficult to discern the exact mass acting as a lead point.

In regards to adult colonic intussusception, more than one-half of large bowel intussusceptions are associated with malignant lesions, including primary tumors and metastatic disease. Colonic adenocarcinoma is the most common malignant neoplasm associated with colonic intussusception.

Routinely, in the pediatric population, an attempt is given to manual reduction with air enema. However, air enemas are generally avoided in the adult population due to the high probability of an underlying malignant process and the associated theoretical risks. These risks include intraluminal seeding and venous tumor dissemination, perforation and seeding in the peritoneal cavity and possible anastomotic complications of the friable tissue.

After lead point intussusception is suggested on cross-sectional imaging, flexible colonoscopy should be the next step for localization and demonstration of the underlying lesion acting as a lead point. Oftentimes, patients will require further surgical intervention if there is underlying malignancy.

REFERENCES

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