



Adult with Ileocolic Intussusceptions

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Case Summary

The patient is a 32 year old man whose only past medical or surgical history includes an appendectomy presented to our emergency room with diffuse abdominal pain. The pain had been present for approximately 3 days, and was characterized by episodes of diffuse, intense cramping followed by long intervals of relative relief. It was accompanied by intermittent nausea and vomiting, as well as diarrhea that at least twice included bright red blood.

The patient was initially a febrile with unremarkable vital signs and laboratory tests (including a complete blood count and metabolic panel). Cross sectional imaging of his abdomen was notable for an intraluminal mass in the distal ileum, likely a submucosal lipoma, as well as for fecalization of the distal small intestine. Also noted was thickening of the ascending colon with signs of chronic inflammation. The initial working diagnoses were evolving inflammatory bowel disease or infectious enterocolitis. He was initially admitted to the medicine while his gastroenterological evaluation continued. Over the following days, his discomfort did not abate. He developed a leukocytosis and had a bowel movement mixed with blood. Given his ongoing symptoms, he was taken for a colonoscopy. Endoscopic evaluation revealed a bulging mass within the cecum, most suspicious for intussuscepted ileum that appeared ischemic with patchy necrosis. The surgical service was promptly consulted and he was taken to the operating room for emergent abdominal exploration. Although his abdominal exam was at that time benign, given his endoscopic findings he was booked for urgent exploration.

Attempt at diagnostic laparoscopy was unsuccessful due to lack of abdominal domain from dilated small intestine, so a midline laparotomy was created. This confirmed an ileo-colic intussusception (Figure 1). The ileum and mid-ascending colon were divided with a linear stapler and the mesentery divided with a bipolar energy device. The intussusception was delivered without reducing it, and a primary ileo-colic anastomosis performed. A clear instance of long segment intussusception of terminal ileum into the ascending colon was seen. After resolution of a brief postoperative ileus, he was discharged to home. He has been seen in the surgeon's office postoperatively and is recovering well. Pathology revealed an intussusceptum with areas of necrosis. The lead-point of the intussusception was a 3.1cm intraluminal lipoma.

Discussion

Unlike in children, adult intussusception is a rare entity

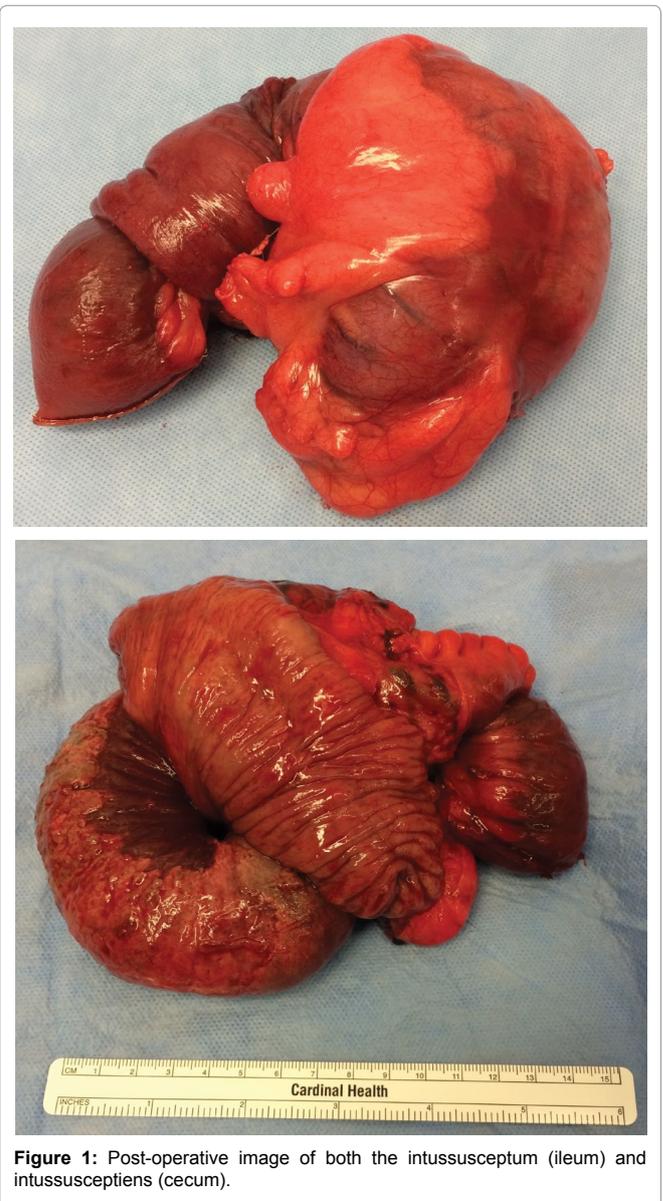


Figure 1: Post-operative image of both the intussusceptum (ileum) and intussusceptiens (cecum).

causing only about 1% of adult intestinal obstructions. Childhood

intussusception often idiopathic, but can sometimes occur after a viral illness [1]. This may be related to hypertrophy of submucosal lymphatic tissue. Although in children the standard approach is to reduce via enema whenever possible and thus to avoid operation, in adults more commonly a luminal or submucosal lesion acts as a 'lead point'. These lesions are occasionally malignant, and so resection is typically indicated.

Before the widespread availability of cross sectional imaging, confirming the diagnosis of intussusceptions in adults was difficult. Symptoms are often non-specific, and include abdominal pain, vomiting and bloody diarrhea being present most commonly. Contrast enemas would occasionally be utilized to diagnose colo-colonic intussusception, but definitive diagnosis was usually made at the time of operative exploration. Computed Tomography (CT) scanning has allowed for more accurate preoperative diagnosis, with a sensitivity and specificity of 80% and 100%, respectively [2]. The classic "target sign" or "sausage" appearance are highly specific, and in recent years there have been attempts to incorporate other radiological findings, including the presence and appearance of any suspicious 'lead point' lesions and the location of the intussusception (entero-enteric, ileo-cecal, or colo-colonic) to help better categorize the likelihood of underlying malignancy [3,4]. A recent report even describes the intussusception of a Meckel's diverticulum within itself [5].

There also remains some controversy in the literature as to whether adult intussusception should be reduced prior to resection, either pre-operatively via air enema for example, or intra-operative, with manual reduction. A typical motive for the latter may be to minimize the amount of bowel resection required. We believe that the decision to reduce prior to resection should be limited to those patients in whom the pre-operative suspicion for either tissue necrosis and/or malignant etiology is lowest. In cases where there is concern for irreversible bowel ischemia, malignancy or risk of intestinal spillage, surgical resection without reduction should be performed without undue delay.

References

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