



## Intestinal Intussusception as Crohn's Disease Debut: A Case Report

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### Abstract

Intussusception is a rare cause of intestinal obstruction in adults, occurring only in 5% of cases. Clinical case: A 22-year-old male patient with intestinal obstruction secondary to ileocolic intussusception as the onset of inflammatory bowel disease, who underwent en bloc resection of the affected segment.

### Introduction

Crohn's disease is a chronic granulomatous inflammatory bowel disease that can affect the entire gastrointestinal tract, its most common location being ileocolic, it has a wide variety of symptoms, but it usually presents as abdominal pain and diarrhea. In its earliest stage, Crohn's disease causes superficial erosions in the small intestine, which as the disease progresses, they become larger and deeper, generating points of stenosis as a lead point, the lead point is pulled forward by normal peristalsis, telescoping or prolapsing the affected segment of bowel (intussusceptum) into another segment of bowel (intussusciptions) for the genesis of intestinal intussusception [1].

Intestinal intussusception is a rare cause of mechanical intestinal obstruction, being found within 1% to 5% of them. In adults, this pathology is typically due to malignancy, recently, and hand in hand with the epidemic of the Human Immunodeficiency Virus, it has been related to lymphoid hyperplasia, Kaposi's sarcoma and non-Hodgkin lymphoma, among others [2].

Intussusception can be classified by etiology (benign lesions; polyps, Meckel's diverticulum, malignant or idiopathic lesions) or by location, as entero-enteric, which is limited to the small intestine; ileo-colic with prolapse of the terminal ileum to the ascending colon; and colo-colic, which is limited to the large intestine [3].

We will report the case of an intestinal obstruction secondary to intussusception due to an inflammatory process with edema and alteration of intestinal contractility as the initial manifestation of Crohn's disease being few cases reported in the actual literature.

### Case Presentation

A 22-year-old male patient with no significant chronic degenerative or surgical history with previous symptoms of lower gastrointestinal bleeding 2 years ago, without further evaluation and with spontaneous resolution, who was admitted through the emergency department of this unit with symptoms of abdominal pain type Colic of three days of evolution, intensity 6/10 on the visual analogue numerical scale, beginning in the hypogastrium and right iliac fossa, accompanied by nausea without reaching vomiting, as well as numerous Bristol 6 to 7 stools. He denies mucus, although he reports hematic material in his last two bowel movements. He reports that in the last 24 h he has suffered a worsening of the clinical picture, with pain mainly located in the right iliac fossa. On directed physical examination, a flat abdomen, with decreased peristaltic sounds, mostly amphorae, pain on superficial and deep palpation in the right iliac fossa, with the presence of signs of peritoneal irritation, no masses or abdominal wall defects were palpable. The hematic biometry only reported leukocytosis, the rest of the laboratories within normal parameters. As there is no clear diagnostic suspicion, a double contrast computerized axial tomography is performed, which shows an intussusception at the level of the ileum, cecum and ascending colon with wall thickening (Figure 1) for which it is decided to proceed to the operating room, finding ileocolic intussusception (Figure 2) for which a right hemicolectomy and ileo-transverse anastomosis were performed.

The surgical specimen is sent for a pathological study (Figure 3) that reports severe acute chronic

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**Figure 1:** Intussusception at the level of the ileum, cecum and ascending colon with thickening of the external and internal wall of the ascending colon. Ileum wall showing the pathognomonic sign of a “target sign”.



**Figure 2:** Finding of exploratory laparotomy in which we observed the intestinal segment with intussusception in the ascending colon.



**Figure 3:** Macroscopic view of intestinal segment, ileocecal valve and right colon.

enterocolitis with extensive areas of ulceration, mucosal abscesses and intracryptic microabscesses, without data of neoplastic process, clinical data compatible with Crohn's disease.

## Discussion

Intussusception is a rare clinical entity in adults that was first described in 1674 by Barbet in Amsterdam and in greater detail by Dr John Hunter [4]. Refers to the pathological process in which a proximal portion of the gastrointestinal tract is telescopically introduced into an adjacent segment, triggering an ischemic injury reaction. This event is preceded by factors such as obstruction with altered peristaltic activity and a lead point for intussusception [5,6].

This entity can occur in both adults and children, being more common in children, in adults it represents only 5% to 10% of all intestinal obstructions [3,7]. In children it is common to present acute symptoms and the classic triad composed of abdominal pain, bloody stools, also called currant jelly, and a palpable abdominal mass [8]. In adults who present with intussusception, it is much less common for them to present the complete triad, since they usually present symptoms of subacute or chronic obstruction, including abdominal pain, nausea and vomiting [9].

In a meta-analysis with a review of 1,229 cases of intussusception in adults, it was found that the most frequent etiology is tumor. However, inflammatory processes accounted for an important part of the cases, including celiac disease, inflammatory bowel disease, appendicitis and pancreatitis. The most common etiology of inflammatory intussusception being acute pancreatitis, in up to 16% of cases [5,6].

Intussusception remains a diagnostic challenge, even for the most experienced of surgeons, as it commonly presents with vague symptoms that often mimic a bowel obstruction. Since the widespread use of Computed Tomography, the diagnosis is made radiologically, with pathognomonic signs of the disease such as the target shooting sign (dense central area with attenuation halo in the invaginate area) and in the coronal section. The sagittal section shows the sign of the sausage [7]. This makes CT the most sensitive imaging modality for diagnosis, with a certainty range of 58% to 100% [10,11].

Treatment in pediatric age is usually reduction by air enema or barium enema. In adults, this therapeutic modality is not recommended due to two special situations, the first is that intussusception is usually secondary to a structural pathology, so enemas are rarely successful and, on the contrary, are associated with an increase in the perforation index, the second is that the etiology of intussusception is generally tumor and with pneumatic decompression cancer cells can spread [2].

Begos et al. [5] suggest that reduction of intussusception should not be performed when edema is found in the intestine and refers that the most appropriate treatment is en bloc resection, since, as previously commented, up to 50% of colonic intussusceptions and enteric diseases are associated with malignancy [5]. In case of suspicion of a benign disease such as celiac disease or Crohn's disease, resection is not usually the most appropriate treatment, especially due to the high risk that exists in patients with Crohn's disease of developing short bowel syndrome, which occurs in some series in up to 10% of patients. In cases where an obstruction or ischemia is not evident and the affected segment is viable, a surgical reduction is recommended [1].

## Conclusion

Even though intussusception is a very rare cause of intestinal obstruction in adults, it is important to always keep it in mind in cases of recurrent abdominal pain and episodes of pseudo-obstruction, especially due to its close relationship to neoplastic entities. Crohn's disease can present as an episode of intussusception due to altered peristalsis due to inflammation and transmural edema. In all cases, the diagnosis must be made with an adequate physical examination, clinical history and, above all, confirmed with tomography, as it has a high sensitivity and specificity. Regarding treatment, this must be individualized according to the diagnostic suspicion.

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