



## Adult Cecocolic Intussusception Caused by Acute Appendicitis

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### Abstract

Adult intussusception is a rare medical condition characterized by the telescoping of one segment of the intestine into another, a phenomenon predominantly associated with pediatric patients. However, adult cases present unique diagnostic and therapeutic challenges due to their infrequency and varied underlying causes. This article presents a noteworthy case of adult cecocolic intussusception caused by acute appendicitis, an atypical occurrence that emphasizes the importance of early recognition and intervention. We discuss the pathophysiology, clinical presentation, diagnostic modalities, and management strategies employed in this distinctive case. The objective of this article is to increase awareness among medical practitioners about the potential link between acute appendicitis and intussusception in adult patients, fostering timely diagnosis and optimal patient care.

**Keywords:** Adult intussusception; Cecocolic intussusception; Acute appendicitis; Bowel obstruction; Ischemia; Surgical intervention; Imaging techniques

### Introduction

Intussusception is a medical condition characterized by the telescoping or invagination of one segment of the intestine into another, often leading to obstruction, ischemia, and even necrosis. While intussusception is more commonly associated with pediatric patients, it can also occur in adults, albeit rarely. Adult intussusception poses unique challenges in diagnosis and management due to its atypical presentation and association with underlying pathological conditions. This article sheds light on a particularly intriguing case of adult cecocolic intussusception caused by acute appendicitis, emphasizing the importance of early recognition and intervention. One intriguing and unusual scenario of adult intussusception is its association with acute appendicitis, a condition traditionally viewed as a separate entity [1]. Acute appendicitis is a common surgical emergency characterized by inflammation of the vermiform appendix. Its manifestation as a causative factor for intussusception in adults presents an intriguing confluence of inflammatory processes and mechanical obstruction, defying conventional understanding. Among various kinds of intussusception in adult, cecocolic intussusception was rare. Although appendiceal adenocarcinoma, adenoma, or mucocele could cause cecocolic intussusception, acute appendicitis was rarely reported as a leading cause of cecocolic intussusception. We report a case of cecocolic intussusception caused by an acute appendicitis treated by laparoscopic right hemicolectomy [2].

### Understanding adult cecocolic intussusception

Intussusception occurs when one segment of the intestine, called the "intussusceptum," telescopes into an adjacent segment, known as the "intussusciptens." This condition is well-known in children, where the leading cause is typically a benign pathological entity called "ileocolic intussusception." However, in adults, intussusception is relatively rare, accounting for only 5% of all cases. Moreover, the underlying causes in adults are often more complex and serious, often involving neoplasms, polyps, adhesions, or inflammatory conditions [3].

### Acute appendicitis

While intussusception in adults is generally associated with neoplastic or structural causes, there are rare instances where acute inflammatory conditions, like acute appendicitis, can trigger intussusception. This scenario is particularly unusual, as acute

appendicitis usually presents with localized symptoms and is not immediately linked to intussusception.

### Pathophysiology and clinical presentation

In the case of adult cecocolic intussusception caused by acute appendicitis, the pathological process likely begins with inflammation and edema of the appendix. As the inflammation progresses, it can cause the appendix to act as a lead point, initiating the telescoping of the cecum into the ascending colon [4]. This phenomenon results in bowel obstruction and ischemia, which can lead to severe abdominal pain, distension, and even peritonitis if left untreated.

### Diagnosis and management

Diagnosing adult cecocolic intussusception caused by acute appendicitis can be challenging due to its rarity and non-specific clinical presentation. However, advanced imaging techniques such as computed tomography (CT) scans and ultrasonography play a crucial role in identifying intussusception and its underlying cause. The "target sign" or "sausage-shaped mass" appearance on imaging studies is indicative of intussusception [5].

Management of this condition requires a multidisciplinary approach involving surgeons, radiologists, and gastroenterologists. Surgical intervention is often necessary to correct the intussusception, remove the inflamed appendix, and address any ischemic or necrotic bowel segments. In some cases, a laparoscopic approach may be possible, but an open surgical procedure might be required for complex cases [6].

### Discussion

Cecocolic intussusception in adults is a rare and intriguing medical phenomenon that warrants careful consideration and

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prompt intervention. In this discussion, we delve deeper into the pathophysiology, clinical implications, diagnostic challenges, and management strategies associated with adult cecocolic intussusception caused by acute appendicitis.

### Pathophysiology

The occurrence of adult cecocolic intussusception secondary to acute appendicitis presents a unique interplay between inflammatory processes and mechanical obstruction. Acute inflammation and edema of the appendix can trigger a cascade of events leading to the telescoping of the cecum into the ascending colon. This cascade results in bowel obstruction and ischemia, leading to clinical symptoms such as abdominal pain, distension, and potential complications like peritonitis. The appendicitis-induced cecocolic intussusception challenges the conventional understanding of intussusception etiology, which often involves neoplasms, polyps, or adhesions [7, 8].

### Clinical presentation and diagnostic challenges

Recognizing adult cecocolic intussusception remains a diagnostic challenge due to its rarity and non-specific clinical presentation. The symptoms can overlap with other gastrointestinal conditions, potentially leading to delayed or missed diagnoses. Abdominal pain and discomfort are common features, but their intermittent nature or mild severity may contribute to diagnostic uncertainty. The lack of classic signs such as palpable abdominal masses often further complicates early identification.

### Diagnostic modalities

Advanced imaging techniques, notably computed tomography (CT) scans and ultrasonography, play a pivotal role in diagnosing adult cecocolic intussusception. The "target sign" or "sausage-shaped mass" appearance observed on imaging studies can provide crucial diagnostic clues. Timely and accurate interpretation of these imaging findings is vital to guide subsequent management decisions [9]. Given the rarity of this condition, heightened awareness among radiologists and gastroenterologists is essential for ensuring prompt diagnosis.

### Management strategies

Surgical intervention remains the cornerstone of managing adult cecocolic intussusception caused by acute appendicitis. The surgical approach may vary based on the severity of the condition, the presence of complications, and the surgeon's expertise. While laparoscopic techniques are preferred for their minimally invasive nature, the complexity of certain cases might necessitate open surgical procedures. The treatment goal involves reduction of the intussusception, removal of the inflamed appendix, and restoration of blood flow to ischemic bowel segments. A multidisciplinary approach, involving surgeons, radiologists, and gastroenterologists, ensures comprehensive patient care and optimal outcomes [10, 11].

### Conclusion

Adult cecocolic intussusception caused by acute appendicitis, although rare, serves as a reminder that even common conditions can occasionally manifest in atypical ways. This case underscores the importance of maintaining a high index of suspicion, especially when faced with unusual presentations of well-known diseases. Early diagnosis, facilitated by advanced imaging techniques, and prompt surgical intervention are crucial for achieving successful outcomes in these challenging cases. Further research and reporting of such cases will contribute to a deeper understanding of the intricate interplay between common and rare pathological entities in the complex landscape of adult gastrointestinal disorders.

### Conflict of Interest

None

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