

Case Report

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Case report: A rare presentation of gastric intussusception

Andrew Pirotte; Stefanie Schaeffer; Atiyeh Samadi; Kate Walden; Ronald Palmen; Cynthia Contreras; Jade Ward; Mitchell Biggers; Taylor Axtell; Dane Clutter; Ruth Vaccina; Kael Morris*

University of Kansas Medical Center, Kansas City, Kansas, USA.

***Corresponding Author: Mitchell Biggers**

University of Kansas Medical Center, Kansas City,
Kansas, USA.

Email: mbiggers@kumc.edu

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Introduction

Gastric intussusception in the adult population is a rare disease process [1]. In this case report, we discuss a unique presentation of gastric intussusception. Though unusual, this pathology is critical to recognize, as sequelae without treatment can be significant. Clinicians should maintain a high index of suspicion for gastric intussusception in patients presenting with acute abdominal pain, nausea, and vomiting. Computed Tomography (CT) is the diagnostic modality of choice [2].

Case report

A 64-year-old female with a past medical and surgical history of anemia, type 1 diabetes mellitus, chronic constipation, hysterectomy, anemia, and appendectomy presented to the Emergency Department (ED) with epigastric abdominal pain. She reported intermittent, cramping abdominal pain and fatigue for three months prior to presentation. She denied associated nausea, vomiting, fevers, diarrhea, weight loss, or night sweats. She has a significant family history of malignancy, including breast

cancer in her mother and maternal grandmother and lung cancer in her father and two siblings.

During initial evaluation in the ED, the patient showed normal vital signs (temperature: 36.5 C, blood pressure: 139/82 mmHg, heart rate: 74 beats per minute, pulse oximetry: 98% on room air, respiratory rate: 15 breaths per minute). On physical examination, she had mild tenderness in the epigastric region without rebound, guarding, or abdominal distention. Labs showed hemoglobin (Hgb) 6.2 g/dL, creatinine (Cr) 1.23 mg/dL, and lactic acid (LA) of 0.6 mmol/L. A CT abdomen and pelvis with intravenous (IV) contrast was obtained. The CT demonstrated diffuse mural thickening of the gastric antrum with associated intussusception of the gastric body extending into the gastric antrum (Figure 1). General Surgery and Gastroenterology were subsequently consulted for further evaluation.

Discussion

In this case, the patient presented with acute on chronic abdominal discomfort, fatigue, and anemia, with an unremarkable

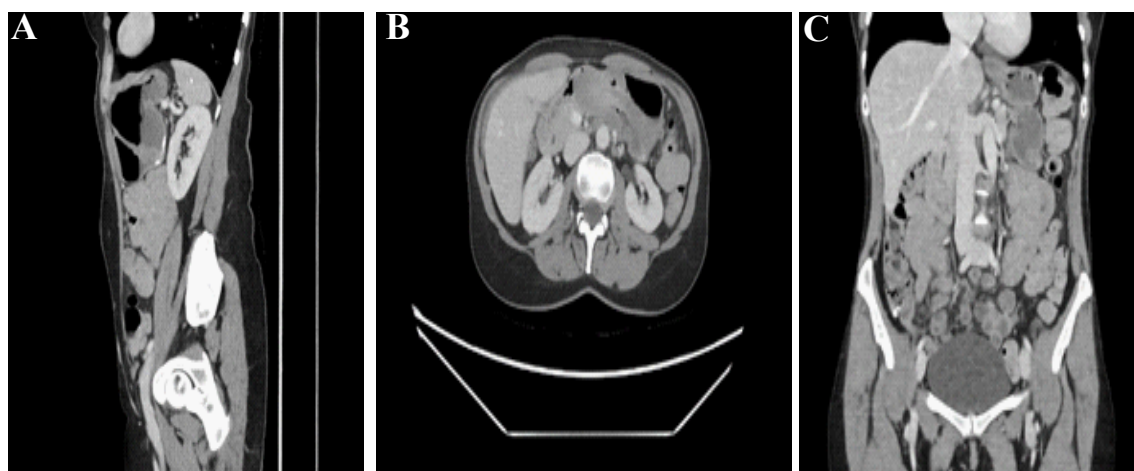


Figure 1: Computed tomography (CT) abdomen and pelvis with contrast showing (A) diffuse mural thickening of the gastric antrum with associated intussusception of the gastric body extending into the gastric antrum (B) Coronal view, (C) sagittal view.

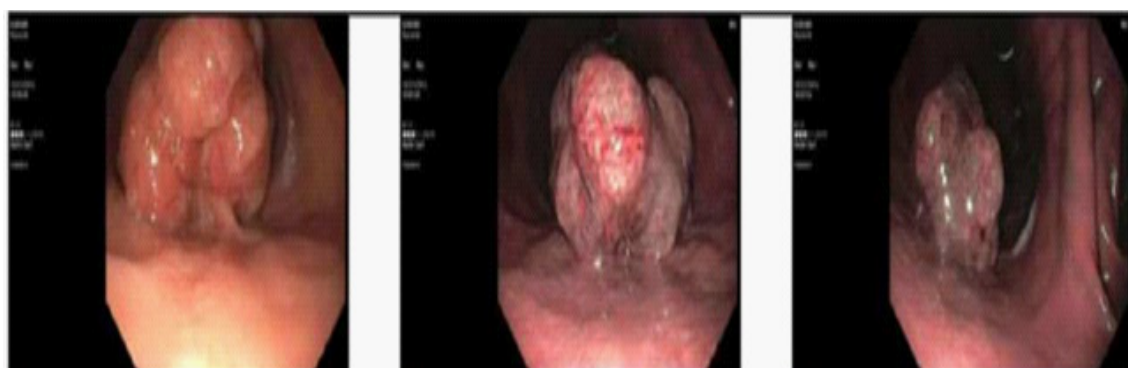


Figure 2: A large polyp measuring approximately 8.0 centimeters by 5.0 centimeters, Paris type 1sp, in the gastric body arising from the greater curvature.

review of systems. Despite a fairly benign history and exam, serum studies revealed the low Hgb level (6.2 g/dL), which raised the team's index of suspicion concerning pathology. The patient also reported a strong family history of malignancy, prompting further investigation into potential gastrointestinal bleeding.

While intussusception is more commonly observed in pediatric populations, adult patients constitute 5% of all cases, with an incidence of 2-3 cases per one million adults annually [1]. Gastric intussusception pathophysiology involves the invagination of a portion of the stomach into itself. Like pediatric patients, the majority of adult cases of intussusception occur in the small bowel with only 10% occurring in the stomach or at a surgical stoma site [1]. However, unlike in pediatric cases, intussusception in adult patients is rarely idiopathic, with 70-90% of cases having identifiable lead points secondary to underlying causes [3,4]. These underlying causes are primarily malignant and benign neoplasms [1,5]. In this patient's case, the underlying cause was a hyperplastic polyp, later determined by pathology to be a gastric adenoma with high-grade dysplasia. Gastric intussusception can lead to severe complications, including gastric ischemia, perforation, and hemorrhage. These morbid sequelae underscore the importance of prompt diagnosis and treatment [6].

CT imaging was critical in diagnosing this patient's gastric intussusception, revealing diffuse mural thickening and the characteristic intussusception of the gastric body into the antrum.

CT remains the gold standard for diagnosing this condition, as it offers high sensitivity in detecting intussusception and related complications [7]. While ultrasound can be highly accurate (depending on provider experience) for pediatric cases of intussusception, it is less effective when used in adults. For these reasons, CT remains the diagnostic study of choice [2,5].

Primary treatment goals in the ED are supportive: pain control, antiemetics, IV hydration, nasogastric tube, and antibiotics depending on patient condition [2]. Adult patients with a high degree of clinical suspicion should be made nothing by mouth (NPO) in case surgical intervention is needed, which is likely to be the case given the high incidence of pathologic lead points [2,5].

Basic comfort and pain management were priority nursing goals for patient care. The patient reported "nagging" and "annoying" pain that had been going on for several months and presented to the ED because she was "no longer able to tolerate the pain while living her daily life." The patient was placed in a position of comfort with directions to operate the bed for change in position and provided warm blankets. Patient was given medications to provide some pain relief throughout the remainder of the ED evaluation.

Due to an often-misleading presentation, there can be a delay in acquiring an accurate diagnosis, leading to complications. Therefore, a high degree of clinical suspicion, particularly in patients presenting with nonspecific symptoms such as epi-

gastric pain, is crucial. The complications from a delay in proper diagnosis can be very severe and possibly life-threatening. Complications to be aware of include peritonitis, bowel ischemia, bowel necrosis, perforated viscus, and sepsis [2].

Conclusions

Gastric intussusception is a complex intraabdominal pathology that should be considered in patients presenting with acute epigastric abdominal pain, nausea, vomiting, or acute abdominal exams. Though rare, this important consideration can be life-threatening and requires intentionality in diagnosis. The most sensitive diagnosis of gastric intussusception can be made via CT [2], and prompt significant intervention is paramount.

Gastric intussusception is managed with a multidisciplinary care team including Emergency Medicine, Internal Medicine, General Surgery, Gastroenterology, Anesthesiology, and, if indicated, Critical Care Medicine. IV therapy including hydration, antibiotics, antiemetics, and analgesia is typically required to manage these patients, as bowel rest is a mainstay of treatment [2]. Surgical and procedural intervention can be required, though intentionality in case selection is crucial [8]. Patients suffering from gastric intussusception may appear reasonably well clinically, though have significant risk of decompensation. These patients should be managed cautiously with preparation for emergent evolution. Managed optimally, gastric intussusception can be treated effectively, resulting in excellent patient outcomes.

Declarations

We, the authors/contributors, certify that we have read and approve the final version of this manuscript. We declare that we will take public responsibility for the contents of this manuscript. We certify that we have met the authorship requirements and declare no conflicts of interest. We consent for this manuscript's publication. We, the authors, declare no conflicts of interest.

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