Valentino syndrome. A case report

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Case Report

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Background: Valentino syndrome results from the perforation of a peptic ulcer. Leakage of gastric or duodenal contents tracks along the paracolic gutter to the right iliac fossa, leading to localized peritoneal irritation that clinically mimics acute appendicitis.
The eponym "Valentino's appendix" was first described in association with the American actor Rudolph Valentino, who underwent an appendectomy for presumed acute appendicitis. Subsequently, he developed peritonitis and multiple organ failure, ultimately resulting in death. Autopsy findings revealed a perforated gastric ulcer as the underlying cause. The spread of inflammatory fluid through the right paracolic gutter explains the localized peritoneal signs in the right lower quadrant.

Keywords: Valentino syndrome.

Valentino syndrome is an uncommon clinical entity caused by perforation of a peptic ulcer, in which leakage of gastric or duodenal contents tracks along the right paracolic gutter toward the right iliac fossa. This process produces localized peritoneal irritation that closely mimics the clinical presentation of acute appendicitis, often leading to diagnostic confusion and delays in appropriate management.

The eponym "Valentino's appendix" originates from the case of the American actor Rudolph Valentino, who underwent an appendectomy for presumed acute appendicitis. His postoperative course was complicated by peritonitis and subsequent multiple organ failure, culminating in death. Autopsy findings revealed a perforated gastric ulcer, identifying the true underlying pathology.

Although peptic ulcer disease has declined in incidence with the widespread use of proton pump inhibitors and eradication therapy for *Helicobacter pylori*, complications such as perforation remain associated with significant morbidity and mortality. The atypical presentation of perforated peptic ulcers, including manifestations resembling acute appendicitis, poses a diagnostic challenge, particularly in emergency settings. Early recognition is critical, as delayed diagnosis may increase the risk of sepsis, generalized peritonitis, and poor clinical outcomes.

Therefore, Valentino syndrome should be considered in the differential diagnosis of right lower quadrant abdominal pain, especially in patients with risk factors for peptic ulcer disease. Imaging modalities such as computed tomography play a crucial role in establishing the diagnosis and guiding timely surgical intervention.

Case report

A 50-year-old female presented with a 72-hour history of abdominal pain radiating to the right iliac fossa, associated with fever, nausea, vomiting, and intolerance to oral intake. Her past medical history was significant for long-standing type 2 diabetes mellitus under medical treatment. She denied any prior surgical history.

On physical examination, the patient exhibited abdominal distension and tenderness to both superficial and deep palpation in the right lower quadrant. Classic signs of acute appendicitis were present, including positive McBurney's point tenderness, positive psoas sign, and positive rebound tenderness (Blumberg sign). Laboratory findings revealed leukocytosis with neutrophilia.

Given the clinical suspicion of acute appendicitis and the presence of hemodynamic instability, the patient was taken emergently to the operating room for an exploratory laparotomy. A midline infraumbilical incision was performed, revealing a non-complicated appendix. During further abdominal exploration, a significant amount of fluid with food-like characteristics was identified in the epigastric region. Approximately 1000 mL of gastric content was manually evacuated. The incision was then extended to a supraumbilical midline approach, which revealed a giant perforated gastric ulcer measuring approximately 7 × 5 cm. (Figure 1).

Based on the intraoperative findings, a partial gastrectomy with Billroth II reconstruction was performed (Figure 2). The patient tolerated the procedure and was transferred from the operating room in stable but guarded condition. Her postoperative course was favorable, with return of

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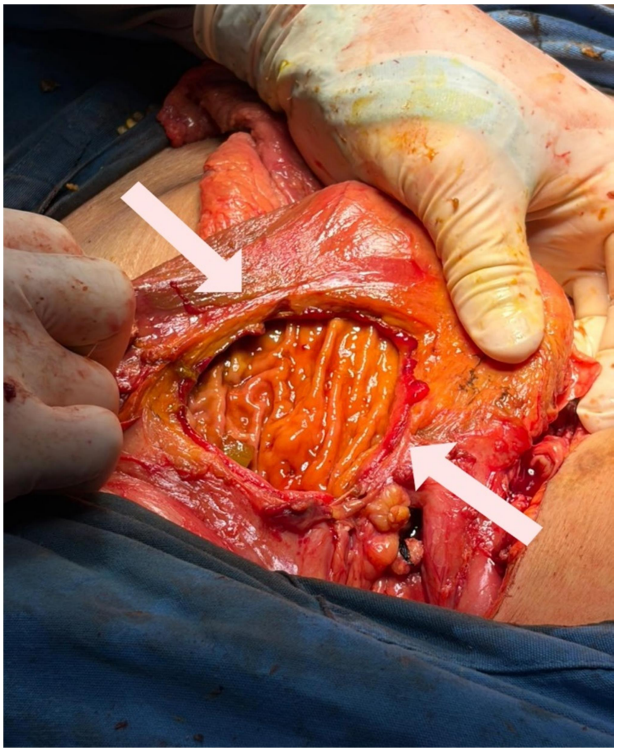

Figure 1. Intraoperative finding showing a giant perforated gastric ulcer (arrow), characterized by a large full-thickness defect in the gastric wall with direct visualization of the perforation site.

bowel function, and oral intake was initiated on postoperative day 5 after the onset of peristalsis. She was discharged home on postoperative day 12, demonstrating an adequate recovery.

Discussion

Acute abdomen is a clinical entity characterized by the sudden onset of severe abdominal pain associated with signs of peritoneal irritation, frequently requiring urgent surgical intervention. Among its etiologies, acute appendicitis—defined as inflammation of the vermiform appendix—remains the leading cause of surgical acute abdomen worldwide. It represents the most common non-elective abdominal condition, with a lifetime risk of approximately 7–8% and an annual incidence ranging from 96 to 100 cases per 100,000 population (1,2).

Peptic ulcer disease (PUD), involving the stomach or proximal duodenum, is primarily associated with *Helicobacter pylori* infection and the use of nonsteroidal anti-inflammatory drugs (NSAIDs). Other contributing factors include corticosteroid use, tobacco smoking, alcohol consumption, and hypersecretory conditions such as Zollinger–Ellison syndrome (3). Despite advances in medical therapy, complications of PUD remain clinically significant, with perforation representing one of the most severe and life-threatening events, associated with high morbidity and mortality (4).

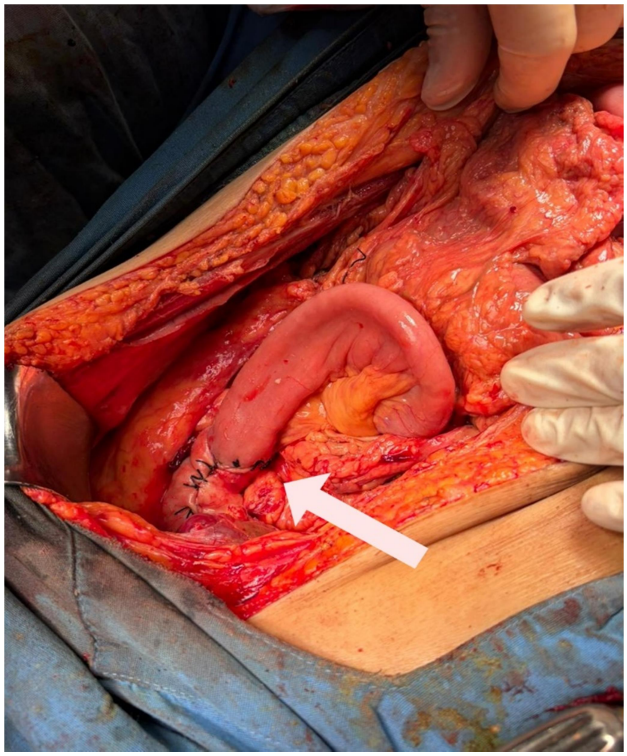

Figure 2. Intraoperative image showing a Billroth II gastrojejunostomy (arrow), demonstrating the gastrojejunal anastomosis performed for reconstruction after repair of the giant perforated gastric ulcer.

Valentino syndrome is a rare presentation of a perforated peptic ulcer that clinically mimics acute appendicitis. In this condition, leaked gastric or duodenal contents spread along the right paracolic gutter into the right iliac fossa, producing localized peritoneal irritation and what has been described as "chemical appendicitis" (5,6). Most peptic ulcers (approximately 60%) are located on the anterior wall, predisposing them to free perforation into the peritoneal cavity (4).

The atypical presentation of Valentino syndrome often leads to diagnostic challenges, as it closely resembles acute appendicitis clinically and, in some cases, biochemically and radiologically. Consequently, it may be overlooked during the initial evaluation. Preoperative diagnosis remains difficult; however, certain clinical features may raise suspicion, including a history of peptic ulcer disease or the presence of known risk factors. Imaging findings such as a normal or only mildly inflamed appendix in association with periappendiceal or intraperitoneal fluid should prompt consideration of alternative diagnoses (6,7). In such cases, contrast-enhanced abdominal computed tomography (CT) is strongly recommended prior to proceeding with appendectomy, as it may reveal pneumoperitoneum, free fluid, or the site of perforation (7).

In many instances, the definitive diagnosis of gastric or duodenal perforation is established

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intraoperatively during surgical exploration, as occurred in the present case. This underscores the importance of maintaining a high index of suspicion and performing a thorough intra-abdominal exploration when operative findings do not correlate with the initial diagnosis.

Regarding surgical management, the approach to perforated peptic ulcers depends on multiple factors, including the size and location of the perforation, degree of peritoneal contamination, and patient stability. While small perforations are often managed with primary closure and omental patch (Graham patch), larger or more complex gastric ulcers—such as the giant perforation observed in this case—may require definitive surgical resection (4,9).

Partial gastrectomy with Billroth II reconstruction (gastrojejunostomy) is a well-established surgical technique indicated in selected cases of complicated gastric ulcers, particularly when there is extensive tissue destruction, large perforation size, or suspicion of malignancy. This procedure involves resection of the distal stomach followed by anastomosis of the gastric remnant to the proximal jejunum, effectively bypassing the duodenum (9,10). Although more technically demanding, it allows removal of the diseased tissue and reduces the risk of persistent or recurrent ulceration. However, it is associated with potential postoperative complications, including delayed gastric emptying, dumping syndrome, bile reflux gastritis, and nutritional deficiencies (10).

In the present case, the presence of a giant perforated gastric ulcer measuring approximately 7 × 5 cm necessitated a more aggressive surgical approach. The decision to perform a Billroth II gastrectomy was appropriate given the intraoperative findings, allowing definitive management of the perforation and removal of severely compromised tissue. The patient's favorable postoperative course further supports the adequacy of this surgical strategy.

Peptic ulcer disease has a lifetime prevalence of approximately 5–10% in the general population, with an annual incidence ranging from 0.1% to 0.3% (3). Although the overall incidence, hospitalization rates, and mortality have declined in recent decades, complications still occur in approximately 10–20% of patients (4). Among these, gastrointestinal bleeding is the most common; however, perforation remains the most frequent indication for emergency surgery and accounts for a substantial proportion of ulcer-related mortality (4).

This case underscores the importance of considering Valentino syndrome in the differential diagnosis of right lower quadrant abdominal pain. Early recognition, appropriate use of imaging, and timely surgical intervention are essential to reduce morbidity and mortality, particularly in atypical presentations such as the one described.

Conclusion

Valentino syndrome is a rare but clinically significant condition that should be considered in the differential diagnosis of right lower quadrant abdominal pain, particularly when findings are atypical for acute appendicitis. This case highlights the diagnostic challenge posed by perforated peptic ulcer disease presenting as an acute surgical abdomen and underscores the importance of maintaining a high index of suspicion.

Early use of imaging modalities, especially contrast-enhanced computed tomography, may aid in preoperative diagnosis and prevent misdiagnosis. Intraoperative vigilance remains crucial when initial findings do not correlate with the suspected pathology. Furthermore, surgical management should be individualized based on intraoperative findings, with procedures such as Billroth II gastrectomy representing a valid option in cases of large or complicated gastric perforations.

Prompt recognition and appropriate surgical intervention are essential to reduce morbidity and mortality associated with this condition.

Conflicts of interests

The authors declare that there are no financial, personal, or institutional conflicts of interest that could have influenced the work reported in this manuscript.

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