International Surgery Journal
Kumar S et al. Int Surg J. 2025 May;12(5):868-871
http://www.ijsurgery.com
pISSN 2349-3305 | eISSN 2349-2902

DOI: https://dx.doi.org/10.18203/2349-2902.isj20251197

Case Report

Valentino's syndrome: a curious case of perforated peptic ulcer mimicking acute appendicular perforation, a case report and comprehensive literature review

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Received: 15 March 2025
Accepted: 14 April 2025

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ABSTRACT

Valentino's syndrome is an uncommon presentation of perforated peptic ulcer disease where the contents of the stomach and duodenum can trickle through the right paracolic gutter and imitate the classic signs of acute appendicitis. This atypical presentation poses a significant diagnostic challenge, especially in older patients with several health issues. We describe the case of a 74-year-old lady having a history of uncontrolled diabetes, hypertension, hypothyroidism, and allergic airway disease. She presented with a sudden onset of mid-abdominal pain that soon localized to the right lower quadrant, accompanied by gradual distention of abdomen, nausea, and a single episode of bilious vomiting. The initial imagining was not confirmatory and only suggested a hollow viscus perforation, the findings pointing towards a probable appendicular perforation. An emergency laparotomy revealed a normal appendix and caecum, with further exploration uncovering a partially sealed 2×2 cm partially sealed pre-pyloric perforation. A modified Graham patch repair was performed, and a feeding jejunostomy was placed to support her recovery given her frail condition. Surgical findings were contrary to the findings noted on the cross-sectional imaging and led to a revision of diagnosis surprisingly from an anticipated appendicular perforation to a perforated peptic ulcer. After a thorough peritoneal lavage, the prepyloric perforation was repaired using a modified Graham's technique, with supportive measures in the form of a feeding jejunostomy that contributed to her gradual recovery. Histopathological analysis confirmed chronic inflammation and the patient's postoperative course was steady and uneventful. This case highlights the importance of considering Valentino's syndrome in elderly patients presenting with right lower quadrant pain. A careful and comprehensive diagnostic approach, aided by modern imaging and thorough surgical exploration, is essential for achieving the best outcomes in these challenging cases.

Keywords: Perforated peptic ulcer, Unusual presentation, Valentino syndrome, Rare presentation, Masquerading gastric perforation

INTRODUCTION

Although perforated peptic ulcers are a common complication of acid-related disorders, encountering them in the form of Valentino's syndrome is extremely rare. In this condition, the extravasated gastric or duodenal contents follows an unusual course along the paracolic gutter, eventually getting collected in the right lower quadrant and hence giving rise to pain and localized peritonitis that can easily be mistaken for acute appendicitis.[1] Making an accurate diagnosis is particularly challenging in elderly group of patients and those with multiple comorbidities, where typical signs may either be masked or atypical. Fortunately, recent improvements in computed tomography (CT) imaging and surgical techniques have greatly facilitated our ability to identify and hence manage these cases effectively.[2,3] Here we describe a case of an elderly lady who presented with this unusual syndrome and provide an in-depth review of the literature to shed light on the diagnostic

challenges and management strategies associated with the curious case of Valentino's syndrome

CASE REPORT

A 74-year-old female with ECOG status 2 and ASA grade 3, having a history of comorbidities like uncontrolled diabetes mellitus, hypertension, hypothyroidism, and allergic airway disease (on regular inhalational steroids) presented to the emergency department acute onset pain of mid-abdominal pain, around the umbilicus which was of moderate intensity to begin with gradually increased in intensity and migrated to the right lower quadrant over several hours. She also experienced progressive distention of her abdomen, which was associated with a single episode of scanty bilious vomiting, and obstipation. Notably, she had a history of melena ten days prior, though she denied any previous symptoms of dyspepsia, acid peptic disease, or chronic use of NSAIDS (Non-steroidal anti-inflammatory drugs).

Clinical examination and investigations

On examination, the patient appeared frail, pale, and dehydrated. Vital signs revealed tachycardia and tachypnea (with minimal oxygen support), while abdominal assessment demonstrated distension, generalized guarding, and severe tenderness in the right lower quadrant-including tenderness at McBurney's point and rebound tenderness suggestive of localized peritonitis. Chest and abdominal X-rays (Figure 1 and 2) revealed a thin rim of air under both diaphragmatic domes, raising suspicion for pneumoperitoneum. Due to elevated creatinine levels from dehydration, a non-contrast CT scan was performed, which revealed (Figure 3-5).

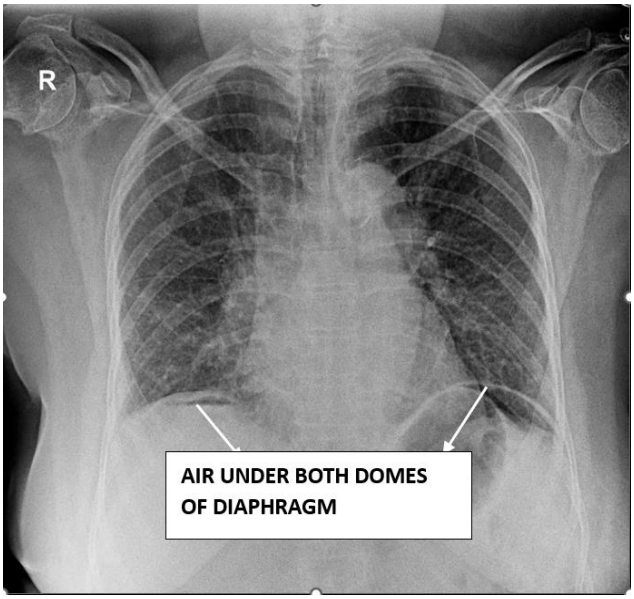

Figure 1: Chest X-ray PA view showing thin rim of air under both the domes of the diaphragm.

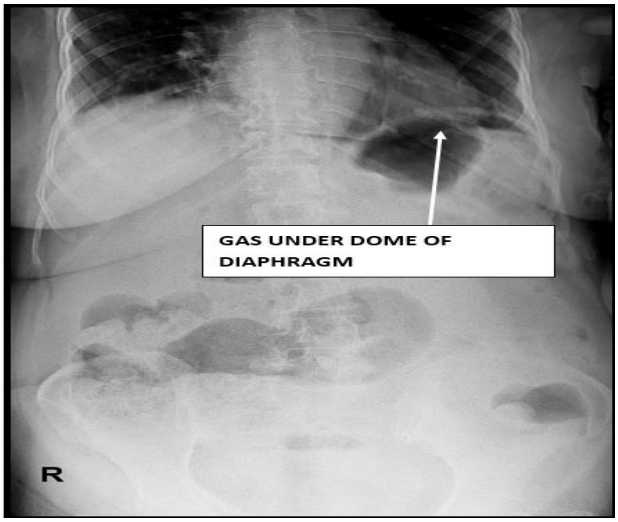

Figure 2: X-ray abdomen erect view showing gas under the dome of diaphragm.

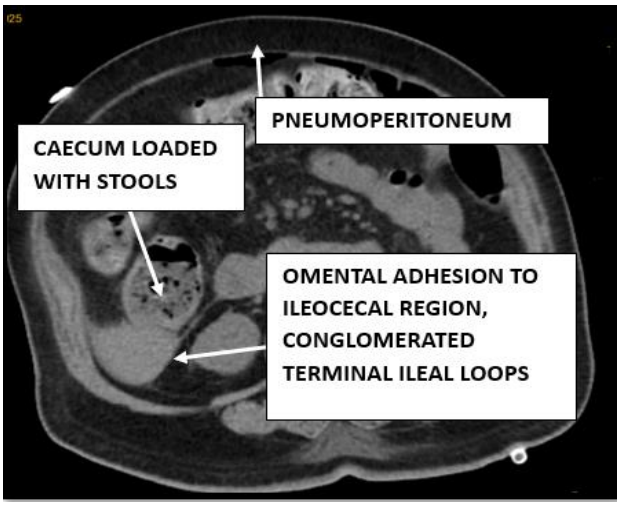

Figure 3: Non-contrast CT scan of the whole abdomen showing pneumoperitoneum, conglomerated terminal ileal loops, omental adhesions to the ileocecal region, caecum loaded with stools.

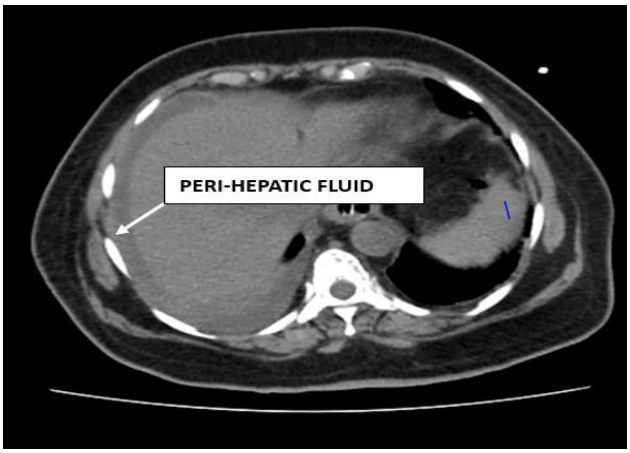

Figure 4: Non-contrast CT scan of the whole abdomen showing peri-hepatic fluid.

Figure 5: Non contrast CT scan showing hazy mesentery around the terminal ileal loops.

Pneumoperitoneum with gas present under both diaphragmatic domes (more pronounced on the left). Conglomerated terminal ileal loops and caecal region with omental adhesions and localized collection in the right iliac fossa, pelvic free fluid, and interloop adhesions Although these imaging findings did not definitively point to an appendiceal etiology, they raised concern for a perforated abdominal viscus.[2]

Management and intraoperative findings

After initial resuscitation with intravenous fluids and broad-spectrum antibiotics, and after obtaining informed consent, an emergency laparotomy was performed via a lower midline incision. Intraoperative exploration revealed: 400 cc of seropurulent ascitic fluid with flimsy interloop ileal adhesions and localized purulent collections. A normal-appearing caecum and appendix, contrary to the preoperative suspicion of appendiceal perforation extension of the incision allowed for a systematic exploration of the entire gastrointestinal tract. Flaky deposits were observed in the gastrohepatic ligament with adhesion of the distal stomach to the undersurface of the left lobe of the liver. Further dissection revealed a partially sealed pre-pyloric perforation (approximately 2×2 cm) (Figure 6). A modified Graham patch repair was performed after debridement and freshening of the perforation edges. Given the patient's advanced age, multiple comorbidities, and poor nutritional status, a feeding jejunostomy was placed, along with a subhepatic drain, to optimize postoperative management.

Postoperative course

The patient was initially maintained on ventilatory support in the intensive care unit and showed progressive improvement over the subsequent days. Feeding jejunostomy feeds were initiated on postoperative day 2, with gradual increases in feed volume. The nasogastric tube was removed on day 3, and the patient was ambulated by day 4. Oral liquids were reintroduced on day 5, and a soft diet was initiated on day 7 as jejunostomy feeds were tapered off. The subhepatic drain was removed on day 8, and the patient was discharged on day 10 with the feeding tube in situ. Histopathological examination of the resected ulcer margin confirmed chronic inflammatory changes without evidence of malignancy.[3,4]

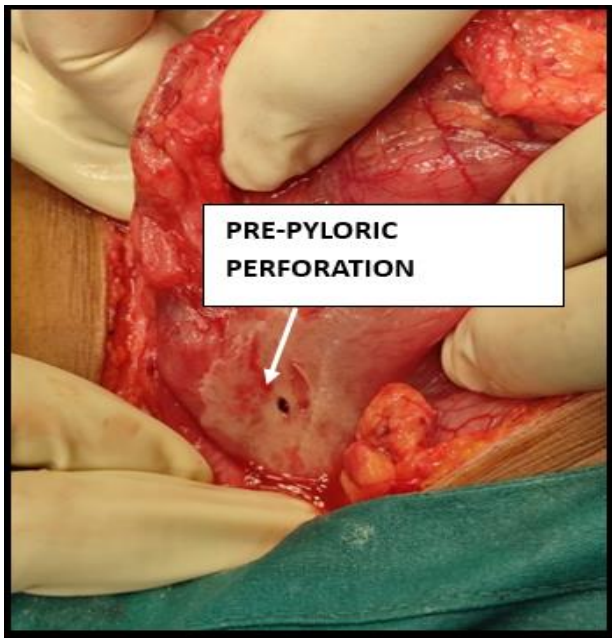

Figure 6: Intra-operative image showing the pre-pyloric perforation.

DISCUSSION

Valentino's syndrome poses significant diagnostic challenges because its clinical presentation closely mimics acute appendicitis. Although acute appendicitis is the common cause of right lower quadrant pain, perforated peptic ulcer disease should be considered, particularly in high-risk populations.[1,4]

Diagnostic challenges and imaging advances

While conventional radiography may reveal pneumoperitoneum, CT imaging is the gold standard for evaluation of acute abdominal conditions. Recent advances in CT technology, including dual-energy CT, have improved the ability to differentiate between appendiceal perforation and perforated peptic ulcers by demonstrating subtle inflammatory changes and atypical

fluid collections.[2,5] In the present case, non-contrast CT-despite limitations imposed by renal function-provided crucial clues that necessitated further exploration.

Operative considerations

The intraoperative discovery of a normal appendix, along with the identification of a pre-pyloric perforation, underscores the importance of comprehensive peritoneal exploration. Modified Graham patch repair remains a reliable method for managing small perforations, especially in elderly patients and those with multiple comorbidities.[3,7] The adjunctive use of a feeding jejunostomy, as applied in this case, supports early nutritional management and has been advocated in recent literature for high-risk surgical patients.[6]

Recent advances and literature insights

Despite its rarity, Valentino's syndrome continues to present a diagnostic and therapeutic challenge. Advances in imaging modalities have enhanced diagnostic accuracy, and minimally invasive approaches are emerging as viable alternatives for selected patients. However, the majority of current insights are derived from case reports and small series, emphasizing the need for further studies to refine diagnostic algorithms and treatment protocols.[4,8]

Clinical implications

This case highlights several key considerations: A high index of suspicion is required for elderly patients with atypical abdominal pain. Comprehensive clinical evaluation and systematic surgical exploration are paramount in avoiding misdiagnosis. Integration of modern imaging techniques and perioperative strategies can significantly improve outcomes in cases of perforated peptic ulcer disease.

CONCLUSION

Valentino's syndrome, although rare, should be considered in the differential diagnosis of acute right lower quadrant pain, particularly in elderly patients with risk factors for peptic ulcer disease. This case illustrates the diagnostic pitfalls associated with atypical presentations and emphasizes the necessity of a thorough clinical, radiological, and intraoperative evaluation. Adoption of advanced imaging techniques and meticulous surgical exploration, including the modified Graham patch repair and supportive nutritional strategies, can lead to successful outcomes even in high-risk patient populations.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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Cite this article as: Kumar S, Bhalerao AS, Tandon V, Govil D. Valentino's syndrome: a curious case of perforated peptic ulcer mimicking acute appendicular perforation, a case report and comprehensive literature review. Int Surg J 2025;12:868-71.