



## Case Report

# Gastric Volvulus in a 31-year-old Female: Case Report

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Citation: Ahilan S, Dayabaran V, Kolachalam R (2023) Gastric Volvulus in a 31-year-old Female: Case Report. Ann Case Report 8: 1434. DOI: 10.29011/2574-7754.101434

Received: 29 August 2023; Accepted: 04 September 2023; Published: 06 September 2023

### Abstract

Gastric volvulus is a rare condition characterized by abnormal twisting or rotation of the stomach. It is a medical emergency that requires immediate diagnosis and intervention to prevent potential severe complications [1]. In this case of gastric volvulus in a 31-year-old female who presented with acute onset severe abdominal pain, the patient underwent prompt diagnostic evaluation and surgical intervention, resulting in a successful outcome.

### Introduction

Gastric volvulus is a rare condition characterized by the abnormal twisting or rotation of the stomach. It can be classified as either organoaxial or mesenteroaxial, depending on the axis of rotation [2]. Gastric volvulus is considered a surgical emergency due to the risk of developing gastric ischemia, necrosis, and perforation [3]. Prompt diagnosis and early intervention are crucial for favorable outcomes.

### Case Presentation

A 31-year-old female presented to the emergency department with acute onset severe abdominal pain. The pain was diffuse and non-radiating. The patient reported a history of ADHD and Insomnia for which she was taking Adderall and Trazadone, respectively. The pain was not relieved by antacids or changes in body position.

On physical examination, the patient appeared pale and in distress. Her vital signs at the time were stable. Abdominal examination revealed distension and tenderness on palpation. Bowel sounds were diminished.

### Investigations

The initial laboratory investigations, including complete blood count, electrolyte levels, and liver function tests, were within normal limits. An abdominal X-ray was performed, which showed

a markedly distended stomach with air-fluid levels. This finding raised suspicion for gastric volvulus.

### Diagnosis

A diagnosis of gastric volvulus was suspected based on the patient's clinical presentation and radiographic findings. Urgent surgical consultation was obtained, and the patient was prepared for further diagnostic evaluation and intervention.

### Treatment and Outcome

The patient underwent an urgent upper gastrointestinal endoscopy, which indicated a possible hiatal hernia [4,5]. The endoscopic examination also revealed torsion of the stomach, with possible compromised blood supply to the affected area. Robotic-assisted laparoscopic surgical intervention was performed, and examination revealed that the stomach was in its normal position without any signs of volvulus, indicating successful spontaneous correction of the condition [6]. Attention was then turned towards the diaphragm, which revealed the presence of a paraesophageal hernia, likely contributing to the previous gastric volvulus episodes [4]. In the decision-making process, various options were considered for managing the hiatus. Given the patient's lack of a history of gastroesophageal reflux disease (GERD) symptoms, the absence of medication usage, and the potential risks associated with fundoplication, it was decided to proceed with gastropexy rather than a loose Nissen fundoplication [7]. This decision was

made to minimize the risk of postoperative dysphagia and gas bloat.

The postoperative course was uneventful, and the patient's abdominal pain resolved completely. She was placed on a clear liquid diet and progressively advanced to a regular diet over the next few days. The patient was discharged on postoperative day 4 with appropriate postoperative instructions. Follow-up visits were scheduled to monitor her progress.

## Discussion

Gastric volvulus is a rare condition that requires a high index of suspicion for diagnosis. The presenting symptoms can vary from mild to severe, depending on the location and the degree of gastric torsion. There are two main types of gastric volvulus: organoaxial and mesenteroaxial. Organoaxial volvulus involves the rotation of the stomach along its long axis, while mesenteroaxial volvulus occurs when the stomach rotates around an axis perpendicular to its long axis. The organoaxial type is more common, accounting for about 60-80% of cases. Presenting symptoms of organoaxial gastric volvulus include upper abdominal pain and distention, dysphagia, vomiting, hematemesis and chest pain. As compared to the symptoms of mesenteroaxial gastric volvulus which present with intermittent abdominal fullness or bloating after meals and nausea and vomiting [8].

Gastric volvulus can occur at any age, but it is most commonly seen in adults over the age of 50. The condition has been reported to have a slight female predominance, although the exact gender distribution may vary among different studies. The incidence of gastric volvulus is relatively low, estimated to be around 1 in 10,000 hospital admissions. However, it is important to note that the condition is often underdiagnosed or misdiagnosed, leading to potential underestimation of its true incidence. Risk factors for gastric volvulus include conditions that increase the mobility or laxity of the stomach, such as diaphragmatic defects (hiatal hernia), diaphragmatic eventration, paraesophageal hernia, and prior abdominal surgeries [9].

Gastric volvulus is considered a surgical emergency due to the potential for complications like gastric ischemia, perforation, and necrosis [3]. Prompt diagnosis and treatment are crucial to prevent serious consequences. The diagnosis of gastric volvulus is often confirmed through radiographic imaging, such as abdominal X-ray or computed tomography (CT) scan. Upper gastrointestinal endoscopy can provide additional information about the degree of gastric torsion and the presence of ischemic changes [10].

Surgical intervention is the mainstay of treatment for gastric volvulus. The goals of surgery include detorsion of the stomach and fixation (gastropexy) to prevent recurrence. Open or laparoscopic approaches can be employed based on the patient's

clinical condition and surgeon's expertise [11].

## Conclusion

Gastric volvulus is a rare and potentially life-threatening condition that requires urgent diagnosis and intervention. Clinicians should incorporate a high index of suspicion for this condition when assessing patients presenting with acute-onset severe abdominal pain, especially in those with risk factors such as GERD or prior abdominal surgery. Timely surgical intervention can lead to successful outcomes and prevent complications associated with gastric volvulus.

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