中文題目：一個胃潰瘍出血病人上的異常發現：胃扭轉

英文題目 ： Gastric volvulus : An uncommon finding in patient with active peptic ulcer bleeding

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## Introduction

Gastric volvulus is a rare entity defined as an abnormal rotation of the stomach around itself. It should stay in the diagnostician's mind since it can present either in the acute or chronic setting with variable symptoms and is diagnosed mostly on imaging including Computed Tomography, upper GI series or on the surgery table. It requires early diagnosis and is a surgical case, as a delay results into severe complications which may cause morbidity and mortality. Here we report a case which presented in our hospital with epigastric pain, recurrent peptic ulcer bleeding and hiatal hernia noted Chest X-ray. And the Organo-axial (OA) gastric volvulus was diagnosed on Computed Tomography.

## Case presentation

A 67-year-old man denied any other systemic disease except a history of trigeminal neuralgia. He mentioned intermittent heartburn sensation and severe regurgitation symptom since his early 40s partially relieved by antacids at local medical department. He presented to the emergency department (ED) due to hematemesis once followed by fainting episode, epigastric pain and tarry stool. He denied any chest pain, shortness of breath, constipation, diarrhea, previous similar episodes, and use of non-steroidal anti-inflammatory drugs and alcohol recently.

On physical examination, his vital sign was stable but pale conjunctiva and epigastric tenderness was found. No peritoneal signs were noted. Electrocardiography revealed a normal sinus rhythm. Laboratory testing revealed hemoglobin 9.3 g/dL with mildly elevated C-reaction protein 9.89 mg/L.

The patient refused nasogastric tube at ED, he received upper endoscopy which revealed huge gastric ulcer with exposal vessel but no active bleeding over upper

body of stomach at hiatus but rebleeding with large amount of tarry stool on the next day under PPI pump treatment. The ulcer was stanched by hemoclip with argon plasma coagulation and hemostasis were achieved. Tracing his chest X-ray at ED, a large soft tissue density contour was noted behind the heart. Therefore, chest Computed Tomography (CT) was performed and revealed organo-axial type gastric volvulus accompanied by para-esophageal hernia. Due to improvement of tarry stool and epigastric pain, the patient recovered without complications, and was discharged with oral PPI and arranged further followed up.

## Discussion

Gastric volvulus is very uncommon, usually presenting in the 5th decade and is defined by the anomalous rotation of the stomach over itself. The rotation can reach different degrees, leading to variable clinical syndromes depends upon the speed of onset, the type of volvulus and the degree of obstruction, ranging from dyspeptic symptoms to complete rotation with vascular impairment which may become surgical emergency. Clinically, Borchardt triad happened in 70% of cases characterized by strong epigastric pain and distension, inability to vomit, and difficult or impossible nasogastric tube bypass. Other clinical presentation including improvement with ventral decumbence, previous pain episode, chronic symptom including with dysphagia, dyspepsia and intermittent pain after intake of meals, which may resemble that of peptic ulcer disease, gastritis, cholecystitis or even angina pectoris. Hematemesis may also be seen due to mucosal sloughing as a result of ischemia or a mucosal tear due to retching.

It can be classified based on etiology as primary volvulus associated with tumors, adhesions, or problems in stomach ligamentous. Alternatively, a secondary gastric volvulus may arise because of disorders of gastric anatomy like peptic ulcers which retract the small curvature and predispose the stomach to rotation, or abnormalities of adjacent organs. And based on the axis of rotation, Type I is organo-axial volvulus as in our case, which is rotating around an axis connecting the pylorus and cardio-esophageal junction and occurs in 60% of the cases. Type II is Mesenteroaxial type is less common in which stomach rotates about an axis passing perpendicular to the longitudinal axis of stomach.

A clinical diagnosis is usually difficult as the disease is very uncommon. Chest radiograph may show a retrocardiac air filled mass suggestive of an intrathoracic stomach herniating through the diaphragm, which was present in our case. In chronic cases especially associated with paraesophageal hernia, barium study is the gold standard. Abdomen CT can confirm the diagnosis, identify the transition point and should be the first line of investigation.

As for treatment option, initial management is nasogastric decompression to decrease the intragastric pressure followed by surgery to check gastric viability, resect gangrenous portion, and perform de-rotation and gastropexy with or without gastrostomy with repair of secondary factors. Emergent laparotomy is still the most common surgical option for patients with gastric volvulus, though laparoscopic interventions have been described. Surgical reduction with or without gastropexy is the most frequently performed procedure. And the conservative treatment reserved only for patients who were unfit to undergo surgery. In our case, the patient is now under conservative treatment due to recurrent peptic ulcer bleeding and the surgical intervention may be needed for him for both para-esophageal hernia and gastric volvulus or further reported complications of a gastric volvulus include ulceration, perforation, hemorrhage, pancreatic necrosis, and omental avulsion may be happened.

## Conclusion

Gastric volvulus is a rare entity defined as an abnormal rotation of the stomach around itself. Here we report a case with Organo-axial (OA) type gastric volvulus diagnosed by CT, presented with epigastric pain, recurrent peptic ulcer bleeding and hiatal hernia noted Chest X-ray. It reminds us if the suspicious of clinical condition and the image study, Gastric volvulus should stay in our mind since early diagnosis is imperative and delay of diagnosis and treatment may result into severe complications.