

# Traumatic double gastric rupture-a rare finding in blunt trauma abdomen

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## Abstract

Road traffic accidents are increasingly common, in which blunt trauma abdomen is a common injury with solid organ and hollow viscus injury, but isolated gastric rupture is a rare injury. We report a case of isolated double gastric rupture in blunt trauma abdomen, which is very rare, caused by road traffic accident. Patient managed by immediate laparotomy and double layer closer of both anterior and posterior perforation.

**Keywords:** Gastric rupture, double gastric rupture, posterior wall perforation of stomach, blunt trauma abdomen.

## Introduction

Anatomical position of stomach relatively saves it from direct trauma and hence from rupture, especially when it is empty. But when it's full it can rupture by direct traumatic insult over upper abdomen [1, 2].

Incidence of hollow viscus perforation in blunt trauma abdominal is 2.9% to 18% [1, 2]. Among all hollow viscus perforation's gastric rupture is quite uncommon, incidence in various studies ranging from 0.4% to 1.7% [1, 2].

Road traffic accident is the most common cause of gastric rupture accounting around 75% [3].

## Case Report

We report an isolated double gastric perforation on anterior and posterior side by blunt trauma abdomen caused by road traffic accident in 25 year old male. Patient presented with pain abdomen and distension. Patient had history of taking meal just before injury. X ray abdomen and CT scan both showed free peritoneal gas. Ct scan further showed gastric rupture on both sides. Rest of solid organs were normal. Patient underwent immediate laparotomy. Patient had

massive contamination of peritoneal cavity by gastric content. All solid organ and rest of hollow viscus were normal. Both perforations on anterior and posterior layer were closed in double layers. Patient improved uneventfully.

## Discussion

Rupture of stomach by blunt trauma is a rare because stomach is anatomically protected by its position and high mobility [4]. Incidence increases when stomach is full and injury is directly over stomach, with sufficient force to raise intra gastric pressure sufficient enough to cause burst of wall [5].

Other mechanism suggested for rupture of stomach when it is empty, in various case series, are crushing between spine and sheet belt, and shearing force which torn the organ at point of fixation, in sudden deceleration [6, 7].

Patients mainly present with abdominal pain and tenderness with shock [2, 3].

A standing x ray of abdomen may show free air but it is known for false negative results<sup>1</sup>.in stable patients CT scan is best as along with stomach injury it shows status of solid organ as well[8, 9].

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In unstable patient peritoneal lavage is fast and simple test which along with blood may show food debris [3]. Ultrasonography is helpful in showing fluid in peritoneal cavity.

Most common Site of perforation is anterior wall followed by greater curvature [1-3], in case which we

are reporting, had posterior wall perforation also, which is very rare presentation.

Repair of traumatic gastric perforation is done by closer in two layer [10] and peritoneal drainage [3] and nasogastric tube drainage.

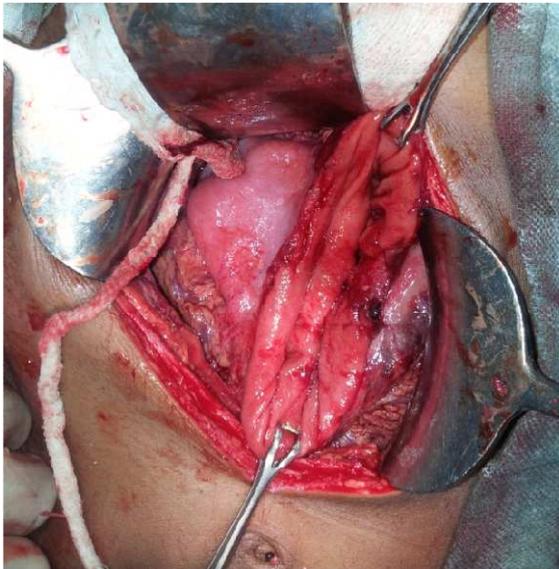


Fig: - A



Fig:-B

**Fig: A** showing rupture of anterior gastric wall & **Fig: B** showing rupture of anterior as well as posterior wall (marked by forceps)

Prognosis depends on associated injuries. Isolated gastric injuries have good prognosis [3].

## Conclusion

Isolated double gastric injury is rare. Usually patient presents with shock, so he need immediate care. Double layer repair carries good outcome in absence of other associated injury.

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