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RESEARCH ARTICLE

Gastric Rupture-A Rare Presentation in Blunt Trauma Abdomen: Case Report by CT scan and Intra operative Finding

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Abstract

Road traffic accidents are now-a-days a common entity and can be associated with blunt trauma abdomen. Isolated gastric rupture is rare in patient of blunt trauma abdomen. We report a case of isolated gastric rupture in patient of blunt trauma abdomen due to road traffic accident.

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INTRODUCTION

Road traffic accidents are now-a-days a common entity and can be associated with blunt trauma abdomen. It is estimated that by 2020, 8.4 million people will die per year from injury. Trauma from traffic accident will be the third most common cause of disability worldwide and second most common cause in the developing world. (Murray CJ, Lopez AD 1997). Gastric rupture is rare in patient of blunt trauma abdomen. Motor vehicle collisions are the most common cause of gastric rupture in blunt trauma, accounting for approximately 75% of cases. (Brunsting LA and Morton J H 1987; Ishikawa K et al., 2002).

CASE REPORTING

We report a case isolated gastric rupture after blunt abdomen trauma in a 25 year old male patient, having a history of motor cycle accident. Patient presented with complaint of pain abdomen. He had taken meal one hour before accident. On examination patient was conscious, oriented with stable vitals and Abdomen was distended, tense and tender. On CT scan examination there was isolated gastric rupture but other hollow and solid viscera were normal. Gastric rupture was surgically repaired and patient improved without any complication.

DISCUSSION

Gastric rupture in blunt trauma abdomen is not a common entity. Occurrence of gastric rupture in blunt trauma abdomen is 0.02% to 1.7 % (Brunsting LA and Morton J H, 1987; Bruscagin V et al 2001; Ishikawa K et al., 2002). In blunt trauma three different mechanisms causing injury to the gastrointestinal organs are described (Steven S and Pearl RH., 2006). Firstly, it is the crush injury that occurs when an organ is compressed violently against the spine.

Second is the burst injury, which occurs when rapid compressive forces are applied to a filled and distended hollow viscous, without direct mechanical compression. History of recent meal has been suggested to cause gastric rupture. Third is the shear injury caused by rapid acceleration - deceleration of an organ at one point of fixation.

Most of the patients with gastric rupture show the presence of signs of shock or abdominal tenderness. However, in this case, signs and symptoms of an acute abdomen appeared late and no physical signs specific for gastric rupture were present, so preoperative diagnosis was difficult.

Although upright chest X-rays can diagnose free intraperitoneal air, chest X-ray fails to identify pneumoperitoneum in a substantial amount of patients with gastric rupture because most trauma chest films are done supine (Brunsting LA et al, 1987; Courcy PA et al, 1984). Even so, only 50% to 66% of the gastric rupture cases develop enough free air to be detected by upright chest X-ray (Brunsting LA et.al.1987; Courcy PA et al., 1984). Diagnostic peritoneal lavage can aid in the diagnosis when blood, food particles, or turbid or bilious fluid is aspirated.(Bruscagin V et al., 2001). In the hemodynamically stable patient, the diagnostic study of choice is CT scan. CT scan can lead to early diagnosis of gastric rupture, and is accurate in detecting associated bowel, vascular or solid organ injury prior to surgery. (Ishikawa K et al.,2002)

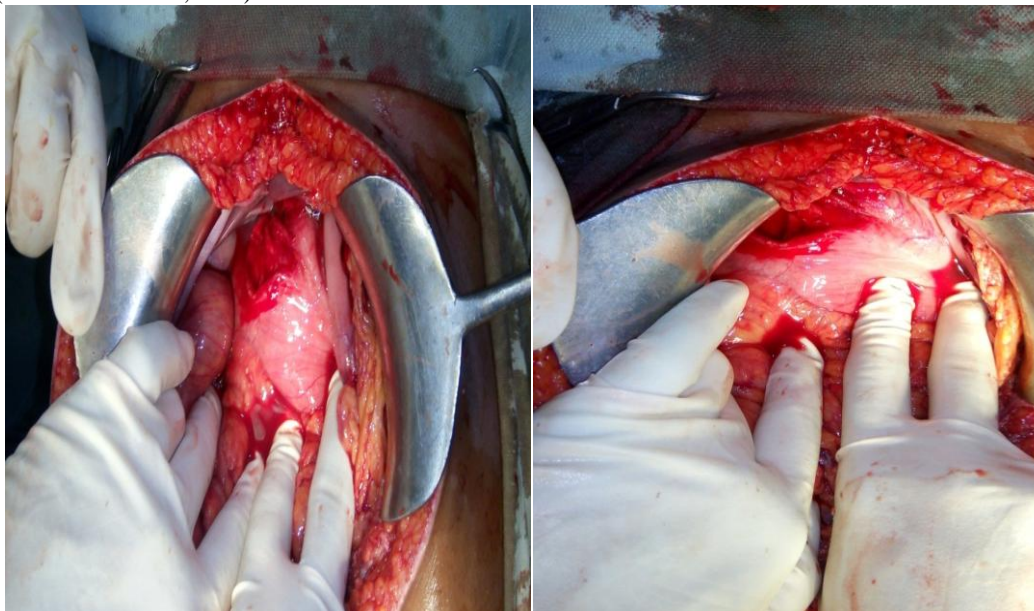


Fig:-1

Fig:-2

Fig:-1 and fig:-2 showing gastric rupture of anterior wall

CONCLUSION

Isolated gastric rupture is a rare in patients of blunt trauma abdomen. Traumatic gastric rupture is aggravated by recently taking meal before trauma. Traumatic gastric rupture can be associated with other injuries like splenic injury, liver injury and fractures. Mortality and morbidity can be reduced by early diagnosis and treatment.

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