



Bike Ride Almost to the Hell- Isolated Gastric Rupture After a Blunt Abdominal Trauma In Paediatric Case: Case Report.

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ABSTRACT

Isolated gastric rupture after blunt abdominal trauma is rare. In current literature gastric rupture from blunt abdominal trauma ranges between 0.02% and 1.7%. This document reports the first non motor vehicle case of an isolated gastric rupture after blunt abdominal injury, which repaired after early diagnosis and aggressive surgical treatment.

PRESENTATION OF CASE

A 12 year old boy attended our emergency surgical department after sustained a blunt abdominal trauma following a fall from his bicycle. He presented with pain and left paraumbilical abdominal ecchymoses. Examination revealed subcutaneous emphysema and a palpable abdominal wall dimple.

CONCLUSION

We present this case report focusing on the paediatric patient to illustrate isolated gastric injury in terms of mechanism of injury, clinical presentation, and immediate surgical management

KEYWORDS : blunt abdomen, gastric tear,

Introduction:

• In children between the ages of 1 and 14 years, trauma is considered to be the major cause of morbidity and mortality. Around 10% of paediatric hospital admissions occur due to abdominal trauma and 80% of these as a result of blunt trauma. Blunt mechanism of trauma to the abdomen commonly occurs due to motor vehicle accidents; however other causes could be seatbelt injuries, vigorous resuscitation and fall from height. Isolated gastric rupture without being associated with intra and extra-abdominal injuries is uncommon after blunt abdominal trauma. We report a rare case of a non-motor vehicle isolated gastric rupture after blunt abdominal injury, which repaired after early diagnosis and aggressive surgical treatment.

Presentation of case:

• A 12 year old boy sustained a trivial trauma with fall from his bicycle 1 h after having cool drink. The emergency department reported that he had 2 episodes of hemetemesis after 4 hrs after trauma. On arrival the boy was haemodynamically stable with a mild tachycardia. He reported abdominal pain. On examination he had tenderness in epigastric region with left paraumbilical ecchymoses. Nasogastric tube revealed a blood. A chest X-ray showed no evidence free air under the diaphragm. CT SCAN- Revealed free intra-abdominal air and minimal free fluid in the peritoneal cavity.

• The operation revealed defect was approximately 7–8 cm full thickness rent of the anterior stomach wall extending from the lesser towards the greater curvature. Primary, two layer closure was performed using a Vicryl 2/0 interrupted sutures and Vicryl 2/0 continuous seromuscular locked suture for the second layer closure. He remained under antibiotic treatment and gastric protection prophylaxis with no significant clinical signs for the first 24. Patient discharged on 8th post operative period.

Discussion:

• We report a rare case of gastric rupture in a paediatric patient

to specify the significant importance of non motor collision fall, accurate diagnosis and early treatment. Approximately 75% of gastric rupture cases in blunt abdominal trauma occur due to motor vehicle collisions. In our case there was a history of cool drink consumption, which is reported in current literature in other similar cases of blunt abdominal trauma. Cool drinks consumption is considered to be another risk factor that increases gastric distension during injury. In this case, the patient presented with signs of acute abdomen and heme-temesis. Clinical examination signs to establish diagnosis is difficult in gastric rupture.

• Computerised tomography in patients with blunt trauma with free intraperitoneal air or fluid collection, stomach dilatation and intraperitoneal positioning of the nasogastric tube indicates gastric rupture. Another radiological sign could be the presence of extra luminal contrast when the CT scan is performed with oral contrast. In this case, CT scan reported free intraperitoneal air in minimum quantity, a large anterior gastric wall disruption with extraluminal contents.

• Blunt abdominal trauma in children carries high mortality, normally due to associated injuries. The repair of the gastric rupture with two layer suture and the air test ensure any missing perforations. Adequate peritoneal lavage could minimise complications from intraperitoneal contaminations and abscesses perioperatively

Conclusion:

• This case report mentions the importance of increase awareness from emergency surgeons to identify single human momentum free collisions with such a large intra-abdominal injury. We report this case to alert surgeons within emergency and trauma centres about the clinical presentation, severity of injuries from simple mechanisms. CT scan helps for prompt diagnosis. Early and aggressive management is vital to improve patient's survival.



Fig 1: A chest X-ray showed no evidence free air under the diaphragm.



Fig 3: showing gastric tear.

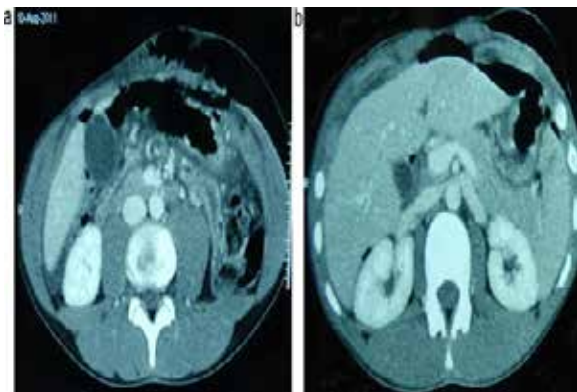


Fig2: CT SCAN- Revealed free intra-abdominal air and minimal free fluid in the peritoneal cavity.

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