Case study

A serious case of blunt trauma to abdomen with evisceration of bowel

Abstract

Bowel evisceration is an uncommon-finding after blunt abdominal trauma, therefore it warrants prompt action and urgent intervention in form of emergency laparotomy.
We report a young male who sustained multiple abdominal injuries due to a high impact mechanism resulting in bowel evisceration and underwent emergency laparotomy.

In a high speed motorcycle accident a 18 year old male sustained a direct blunt injury to his abdomen which resulted in a perforation of the stomach transection of colon multiple mesenteric injury b/l pneumothorax. The abdominal wall split transversely extruding intact bowel.
After resuscitation according to ATLS guidelines patient was taken for emergency laparotomy
After 20 days in intensive care unit and surgical ward patient was discharged in a satisfactory condition

Keywords: *blunt trauma abdomen, bowel evisceration, bowel perforation, pneumothorax, gastrectomy*

Introduction

Traumatic injury is the leading cause of emergency department admissions disability and death. Motor vehicle accident is one of the significant causes of injury related death across the world.
Moreover in trauma patients abdomen is the third most common injured region. Abdominal organ evisceration is uncommon to be encountered particularly after blunt trauma

Case report

An eighteen year old Indian male a victim of a high speed motorcycle accident where he lost control of vehicle and rammed into another when a blunt object

hit him in stomach resulting in the below mentioned injuries(figure 1a and 1b).
He was not wearing any personal protective gear.
He was brought to trauma centre of JNMCH. At the time of presentation his vitals where
PR-112/min, BP-96/60 mm of hg, RR 22/min sPO2 96% on room air with severe bowel evisceration(Figure 1 and 2).
He was resuscitated immediately according to ATLS guidelines.

Figure 1a

Figure 1b

Patient was immediately taken to emergency surgery OT for exploratory laparotomy as a damage control surgery after primary survey.

Upon exploration following findings were seen(figure 2a and 2b):

1) Stomach was perforated at greater curvature with ryles tube in situ
2) Transverse colon was transected
3) Multiple mesentric injuries
4) Multiple injuries over parietal abdominal wall

Above findings were managed by:

1) Perforation at stomach was closed primarily by polyglactin suture and omental patch repair.

2) Transected transverse colon was closed primarily with polyglactin suture.
3) A loop ileostomy was made at 1.5 feet proximal to ICJ
4) Mesentric injuries were primarily repaired with absorbable suture.
5) Parietal abdominal wall injuries were closed with polyglactin suture.
6) All solid organs were normal.

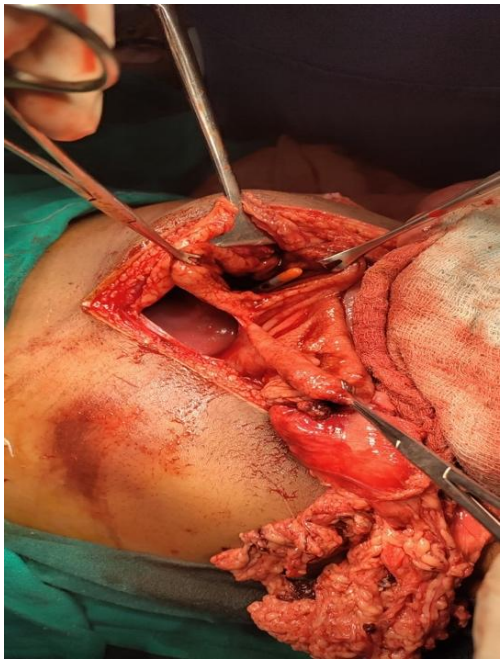

Figure 2a

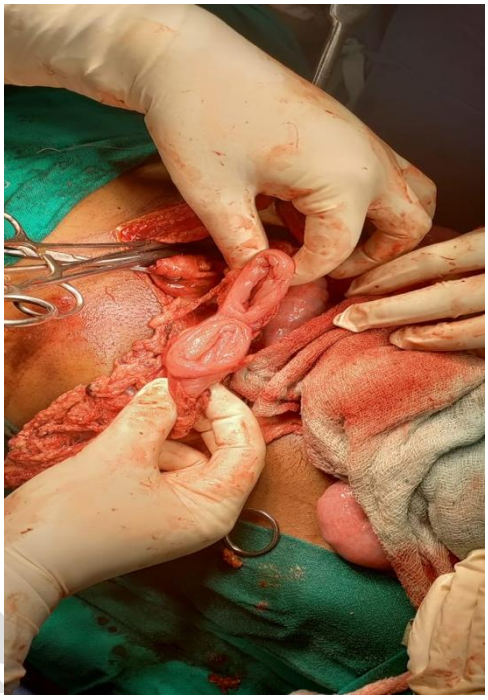

Figure 2b

The abdomen was closed primarily, patient extubated and shifted to xray. Chest Xray was done which showed B/L pneumothorax(figure 3), for which B/L intercostal chest tube was inserted in intensive care unit.

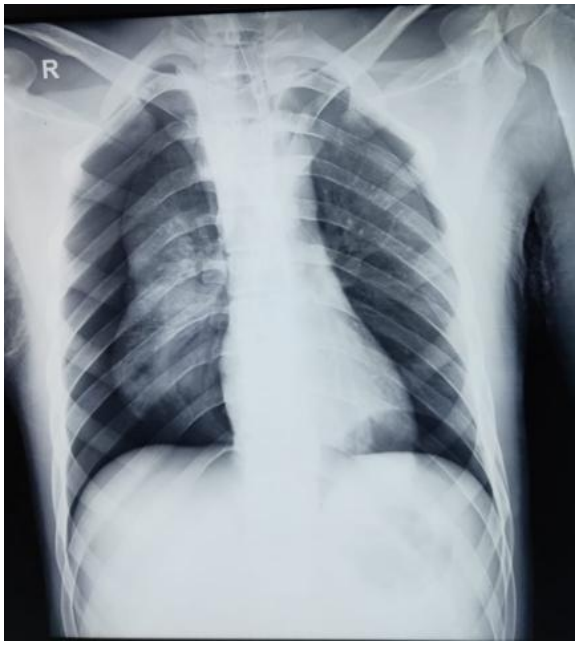

Figure 3

Patient was kept in surgical HDU for 12 days. Aggressive chest physiotherapy was done and chest tube removed on post op day 6.Wound was healthy with no discharge. Patient was ambulated from post op day 2. Stoma was functional on post op day 4. Patient was kept nil per oral for 8 days after which oral sips were started gradually. Ryles tube was removed and drains were removed subsequently. Patient was discharged in satisfactory condition.

Currently the patient is on regular outpatient follow-up and maintaining satisfactory condition with resolution of his injuries and functional ileostomy.

Discussion

Bowel evisceration is thought to occur from a simultaneous surge in abdominal pressure and presence of shearing forces. Viability of the eviscerated organ is to be assessed.
Incidence of gastric perforation following blunt trauma to abdomen is not the usual presentation and usually results following a high speed injury
Site and location of the injury, time of the last meal and seat belt use are some of the factors influencing the gastric injury.
The surgical management in small or single lesions is comprised of debriding the wound and simple suturing. Partial gastrectomy might be indicated in cases with extensive damage to the stomach
The evisceration of organs was as follows (number of patients): Small bowel in 27 (40.9%), stomach in 2 (3%), colon in 1 (1.5%), small bowel and stomach in 2 (3%), and small bowel and colon in 3 (4.5%). The serosal tear is considered the most common colonic injury in blunt abdominal trauma.
Emergency laparotomy should be done in evisceration of both omentum and organ, and in suspected cases of peritonitis.

Conclusion

Patients with severe injury mechanism have high mortality and morbidity rates. Evisceration injuries require prompt, expeditious and timely intervention with damage control procedures.
A multidisciplinary team approach is mandatory throughout the period of treatment until recovery and rehabilitation.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

Referrences

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