

INCARCERATED ACUTE TRAUMATIC ABDOMINAL WALL HERNIA : A RARE ENTITY

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ABSTRACT

Acute traumatic abdominal wall hernia is a rare type of hernia that occurs after a low or high velocity impact of the abdominal wall against a blunt object only few cases have been reported in literature. We report a case where a high velocity impact due to roadside accident caused a traumatic abdominal wall hernia in a 48-year-old male patient. The physical examination findings revealed the presence of traumatic abdominal wall with gut lying just below the fat of anterior abdominal wall which was confirmed on USG. Patient was managed by exploratory laparotomy with resection and ileo-ileal anastomosis. The post operative period was uneventful. It is important to emphasize the importance of the physical examination in such cases to make early diagnosis. Urgent surgical intervention is recommended to avoid wound and bowel related complications.

KEYWORDS : Traumatic abdominal wall hernia, Exploratory Laparotomy

INTRODUCTION

Traumatic abdominal wall hernia is a rare clinical entity, with only a few cases being reported since 1906. Most cases are caused by an injury of falling on or hitting against angled or curved material, less common causes are high-energy type traumas like motorcycle accidents, fall from a height, seat belt injuries, pedestrian accidents and larger deceleration forces.¹ With few cases being reported, a consensus in diagnosis and management has not been established in the literature.² The incidence of traumatic abdominal wall hernia was found to be most prevalent in the male population younger than 50 years of age and presented as either ecchymosis (49%) or a localizing palpable hernia (31%).² Traumatic abdominal wall hernia are often accompanied by intra-abdominal injuries.³ Diagnosis requires careful examination and high index of suspicion. We encountered a patient with traumatic abdominal wall hernia after blunt abdominal trauma who was treated by exploratory laparotomy with resection-anastomosis of small bowel and anatomical repair of hernia. Patient remained well in postoperative period.

CASE DESCRIPTION

A 48 years old, male patient presented to the emergency room of our hospital with history of hit by a vehicle from front while he was walking along the road. After the accident patient started having complaint of severe abdominal pain and the site of impact started bulging progressively. There was no personal history of abdominal wall hernias or chronic disease in the past. On general physical examination, pulse rate was 110/minute, the blood pressure was 150/90 mm of mercury. Local examination revealed bruises and abrasions over abdomen above umbilicus, with a diffuse swelling located above the umbilicus of size ~ 5×6 cm which was not reducible; the rest of the abdomen was very tender and rigid. Nasogastric tube was inserted and there was haemorrhagic output mixed with billious fluid. The complete blood count parameters were not remarkable, the erect chest radiograph showed no evidence of free air under right dome of diaphragm and the abdominal ultrasound showed herniated bowel loops through an abdominal wall defect. The diagnosis of traumatic abdominal wall hernia was made and a midline laparotomy was done. In operative findings herniated small bowel loop was present through a defect of size ~3×3cm in anterior abdominal wall with separation of sheath from overlying fat

layer. ~ 500 ml haemorrhagic fluid was present in peritoneal cavity, herniated ideal loop showed gangrenous changes; the gangrenous part of ileum (~10cm) was resected and ileo-ileal anastomosis was done.

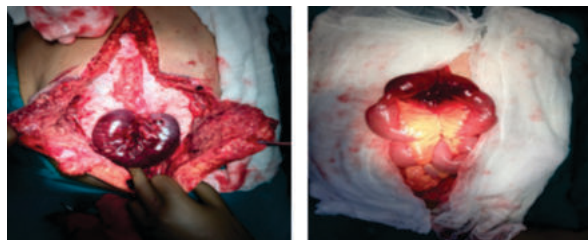


Fig 1. Herniated bowel showing gangrenous changes

Closure of sheath was done with Polydioxone suture no 1 with continuous sutures. A 14F negative suction drain was placed over sheath after repair. There were no immediate postoperative complications. The patient was allowed orally on post-op day 5 and the hospital stay was uneventful and stitches were removed after 10th postoperative day. On follow up patient is doing well.



Fig 2. Post-operative wound closure

DISCUSSION

Abdominal wall disruption following blunt trauma is a rare but challenging injury in both the acute and chronic phases. Traumatic abdominal wall hernia is defined as the 'herniation through disrupted musculature and fascia associated with adequate trauma, without skin penetration, and no evidence of a prior hernial defect at the site of injury. The reported prevalence of traumatic abdominal hernia among trauma patients, even at dedicated trauma centres with the best facilities, is less than 1%.⁵ Netto et al. retrospectively reviewed 34 patients presenting acutely with a traumatic abdominal wall hernia at a regional trauma centre from January 2000 to December 2004. The most frequent mechanism of injury was motor vehicle collision. The diagnosis of traumatic abdominal wall hernia was made primarily by computed tomography scan.⁶ Differential diagnosis includes rectus sheath hematoma, tumor or pre-existing hernia; clinical survey is related not only to the hernia itself, but rather to associated or coexisting injuries; traumatic abdominal wall hernia is rarely isolated; associated intra-abdominal injuries are determined in up to two-thirds of patients with traumatic abdominal wall hernia and have been reported with an incidence between 25 and 70%.⁷ The authors recommend a high level of clinical suspicion for traumatic abdominal wall hernia in all patients with traumatic abdominal wall injuries.⁸ Most of the patients with traumatic abdominal wall hernia required urgent laparotomy or laparoscopy and bowel resection.⁶ We present the case of a patient with a traumatic abdominal wall hernia after a blunt abdominal trauma in which the high level of suspicion with USG correlation led us to the diagnosis because it could not be confirmed by CT due to sick condition of the patient. The appropriate timing and approach of surgical treatment for traumatic abdominal wall hernia depend on a case-by-case basis and represent a diagnostic and therapeutic challenge.⁹ Open surgical repair in layers or laparoscopic suturing during diagnostic laparoscopy may be appropriate in managing traumatic abdominal wall hernia.⁸ We did open primary closure of the fascia with continuous suturing with Polydioxone no.1 sutures.

CONCLUSION

Traumatic abdominal wall hernia should be suspected when patients present with an abdominal swelling following blunt abdominal trauma especially high-energy injuries to the abdomen. A good history and physical examination are of exceptional value in making an early diagnosis of traumatic hernia. In doubtful cases CECT abdomen is the investigation of choice which confirms the diagnosis and also helps in surgical management. An early surgical intervention is the mainstay of management to prevent complications associated with this condition.

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