POST TRAUMATIC LEFT SIDED DIAPHRAGMATIC HERNIA

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ABSTRACT:
INTRODUCTION: Diaphragmatic hernia is a rare entity caused mainly by blunt trauma abdomen. Diagnosis is usually delayed with consequences being obstruction and strangulation of gut loops.
PRESENTATION OF CASE: 50 year old male who had blunt trauma abdomen and left sided chest trauma presented in emergency with multiple episodes of vomiting. Patient was diagnosed with left sided diaphragmatic hernia on chest X-ray and CT Chest. Patient was taken for exploratory laparotomy. Stomach, jejunum, ileum and transverse colon reduced back into abdominal cavity. The linear defect of diaphragm was closed in two layers.
DISCUSSION: Diaphragmatic injury is more common in blunt trauma abdomen. CT chest is an important modality for diagnosis as clinical diagnosis can be difficult. Any exploratory laparotomy for thoraco-abdominal injury diaphragmatic inspection and palpation is mandatory to prevent future obstruction or strangulation leading to morbidity and mortality
CONCLUSION: Diaphragmatic hernia should be kept in mind for any patient with blunt trauma abdomen presenting with intestinal obstruction.

KEY WORDS: Traumatic diaphragmatic hernia, Exploratory Laparotomy, CT Scan

INTRODUCTION:
Post traumatic diaphragmatic hernia is a rare entity. It can be found in blunt as well as penetrating abdominal injury. The incidence of hernia is 0.8 to 5 %. The diagnosis is often missed due lack of typical signs and symptoms. Patient can present with acute intestinal obstruction and severe respiratory distress. We report a case of left sided diaphragmatic hernia post blunt trauma abdomen presenting in emergency.

CASE REPORT:
A 50 year old male, resident of Saharanpur, Uttar Pradesh, India was brought to emergency of M.M.I.M.S.R, Mullana with alleged history of road traffic accident on the same day. He presented with multiple episodes of vomiting. There was no h/o loss of consciousness, seizure, ear or nasal bleed. There was trauma to left sided chest. Patient did not have any other major head, limb or abdominal injury. Patient was occasional alcoholic and smoker. On examination patient was conscious, oriented to time, place and person, abdomen was soft, non distended, no guarding, no rididity, tympanic on percussion, bowel sounds heard. Abrasion of 10 X10 cm present in the left hypochondriac and left hemithorax region. Chest compression test was positive. Patient was moving all four limbs. On investigation chest X-ray (Fig-1) and X-ray erect abdomen (Fig-2) showed multiple gut loops in the left lower and mid lung zone. Ultrasonography FAST was positive with mild free fluid in abdomen and left sided perinephric collection. No solid organ injury. CT Chest (plain) (Fig-3) shows herniation of stomach and large bowel in the left hemithorax likely to be Diaphragmatic herniation, hairline fracture of the anterior aspect of 7th rib left side. No haemothorax and no other abnormality. On exploration, stomach, jejunum, ileum and transverse colon were found herniating through the defect in the left hemi-diaphragm (Fig-4). The defect was of around 15 cm. The bowel loops looks healthy with good peristalsis. The contents were reduced. The defect was repaired in two layers without mesh. Diaphragm was closed with 1-0 polypropylene continuous suture and peritoneum with 3-0 polyglactin continuous suture (Fig-5). Intercoastal drainage tube was put on the left side. Post operatively patient was managed with IV antibiotic Cefepime 1gm IV BD, Amikacin 500mg IV BD and Metronidazole 500mg IV TDS. Post operative period was uneventful. Chest tube was removed on day 5.

DISCUSSION:
Blunt injury to diaphragm is usually linear while penetrating injury causes irregular defect. In post traumatic diaphragmatic injury, there is herniation of abdominal content through the defect. There is no sac of hernia so it is also called as false hernia. It mostly occurs on the left side because right side is protected by right lobe of liver. 80% of the etiology is blunt trauma while only 20 % constitute gun shot injury or penetrating injury. The diaphragmatic injury can be classified according to the duration of diagnosis as acute-presents within 14 days of injury, latent-diagnosed after acute injury but before strangulation and obstruction and late-diagnosed after obstruction or strangulation of gut loop has set in.[1] Diaphragmatic injury are difficult to diagnose and they remain apparent even for 10 years.[2] Diagnosis of diaphragmatic hernia is difficult clinically. It can be made by listening the bowel sound in the hemithorax, absent breath sounds and respiratory distress.[4] Majority of the diaphragmatic injury can be detected by chest cardiograph and its subsequent films.[5] Meticulous inspection and palpation of
diaphragm is extremely necessary in exploratory laparotomy for any abdominal injury cases.[3]

CONCLUSION:
Diagnosis of diaphragmatic injury is extremely necessary for any thoraco-abdominal injury so as to prevent delayed presentation and chances of obstruction, strangulation of gut loops leading to severe morbidity and mortality.

CONFLICT OF INTEREST STATEMENT:
None

ETHICAL APPROVAL:
Informed and written consent taken from the patient

REFERENCES:

FIGURES:

FIG 1. CHEST X-RAY
FIG 2: XRAY ERECT ABDOMEN

FIG 3: CT CHEST

FIG 4: LEFT SIDED DIAPHRAGMATIC INJURY WITH HERNIATION OF GUT
FIG 5: CLOSURE OF DIAPHRAGMATIC HERNIA