

Research Journal of Pharmaceutical, Biological and Chemical Sciences

An Interesting Case of Abdomino-Thoracic Injury.

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ABSTRACT

Traumatic diaphragmatic injury (DI) is a unique clinical entity that is usually occult and can easily be missed. Their delayed presentation can be due to the delayed rupture of the diaphragm or delayed detection of diaphragmatic rupture, making the accurate diagnosis of DI challenging to the trauma surgeons. An emergency laparotomy and thorough exploration followed by the repair of the defect is the gold standard for the management of these cases. We report a case of penetrating DI in a 45 years old gentleman and present a comprehensive overview for the management of traumatic injuries of the diaphragm.

Keywords: abdomen, thoracic, trauma, diaphragm

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CASE REPORT

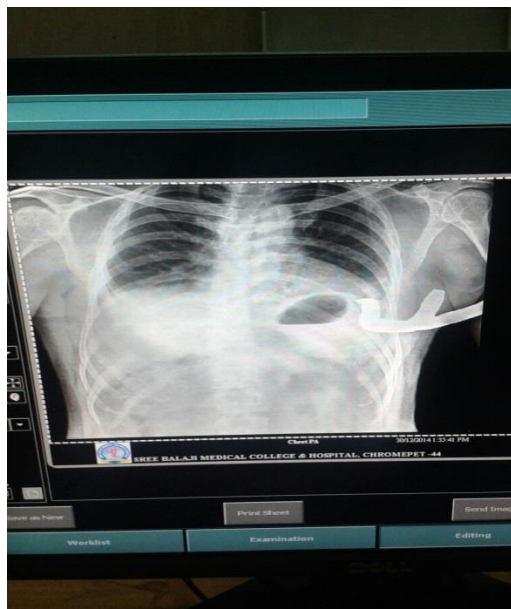
45 years old male electrician by occupation presented to Sbmch casualty on 30/12/2014 at 1.30pm with complaints of accidental penetrating injury⁽³⁾ to chest wall by means of an tri- sphere (thirisulam) while working with electrical appliance at a 15 feet height ,fell over the tri-sphere. No other external injuries .C/o pain at the entry site.C/o breathing difficulty ,No h/o haemoptysis, cyanosis,abdominal pain, giddiness , significant medical& surgical history.



Immediate chest x-ray and CT was done [1].

Chest X-Ray Findings

First prong was noted penetrating postero-laterally in between 8th and 9th ribs.no evidence of haemopneumothorax ,cardiac shadow normal ,gastric fungal shadow present.

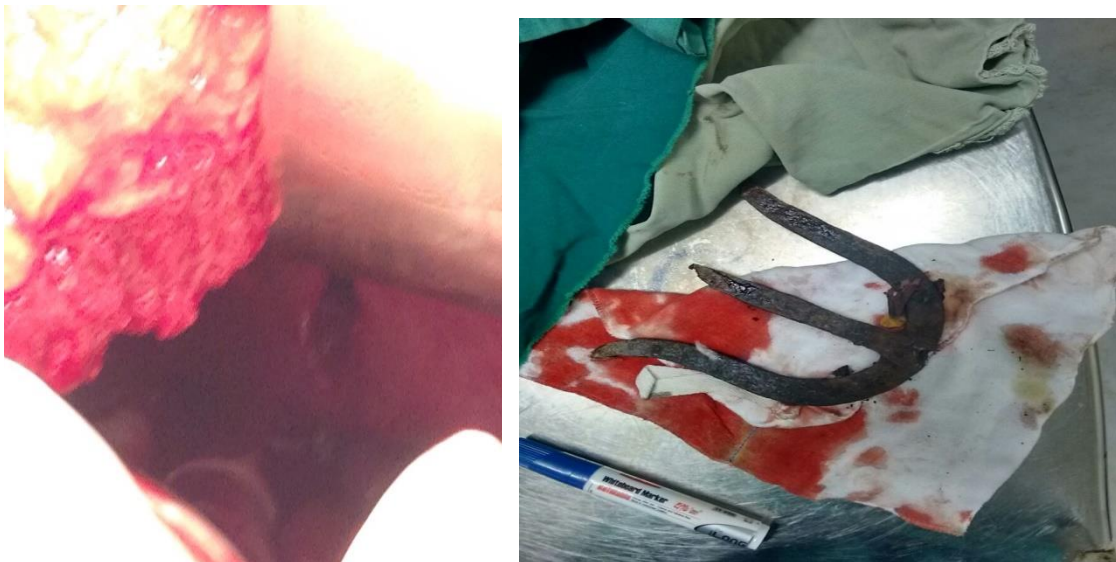


CT Findings

Second prong penetrating into superficial musculature of the left lateral chest wall. third prong noted penetrating posterolaterally inbetween 8th and 9th ribs piercing the dome of the left diaphragm with its tip lying in the subphrenic region minimal left pneumothorax,large pocket of air noted in the left subphrenic space.



After all routine surgical work up patient was immediately shifted to emergency operation theatre. Emergency laparotomy was done [2], Diaphragmatic rent of size 2*2 was found and closed with 1.0 prolene. ICD was placed.



DISCUSSION

Diaphragmatic injuries are known to occur following blunt and penetrating [3,4] injuries and invariably the early phase diagnosis may be difficult. Delayed diagnosis is associated with considerable co-morbidity. The incidence of diaphragmatic injury [5, 6] varies from 0.8% -5% in various series. Blunt thoracic and abdominal traumas are associated with an incidence of 5 – 7%, whereas diaphragmatic injuries are seen in 3 – 15% of penetrating trauma. The incidence in the present series has been 2.06% (12/258). Hereby in this cases of penetrating injury of the left diaphragm, primary closure of the rent was done. There was no evidence of spleen or hollow viscous injury.

CONCLUSION

Traumatic injuries of the diaphragm are often clinically occult and can be masked and disguised by other violent injuries associated with polytrauma. The best approach is the high index of suspicion in such cases. Chest X-ray is the initial screening option followed by spiral CT (preferably with multidetector rows) to evaluate the diaphragm. Optimal treatment of DI consists of early repair on laparotomy with careful evaluation



of other associated violent injuries; however, with an increase in experience and expertise, laparoscopy and thoracoscopy, especially VATS, are finding their places in both diagnosis and definitive management of thoracic trauma with occult diaphragmatic injuries. Diaphragmatic injuries are uncommon. Thus we report a case of diaphragmatic injury presented as penetrating injury to abdomino thoracic cavity.

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