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Case Report

A case report on traumatic diaphragmatic injury repaired with prolene mesh

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ABSTRACT

Penetrating and blunt trauma rarely results into traumatic diaphragmatic hernia which oftenly undergo unrecognized. A 25 year old male admitted with chief complaints of difficulty in breathing since road traffic accident. Chest X-ray of the patient showed collapsed lung along with contents of abdomen in left hemithorax. Patient was stablised and contrast enhanced CT scan of chest was done which showed abdominal contents in left hemithorax with diaphragmatic injury on left side with no spillage of contents in thoracic cavity. Left posterolateral thoracotomy was done through 6th intercostal space. The abdominal contents were reduced back into the abdominal cavity with care and a circumferential tear of diaphragm was found with complete avulsion of diaphragm from chest wall anteriorly and laterally. Repair was done with prolene mesh as primary repair was not possible due to avulsion of margins from anterior and lateral walls. One left chest-drain was put which was removed on 3rd post-operative day. The patient was put on antibiotics in postoperative period and was started orally from 4th post-operative day after appearance of bowel sounds. The patient showed good recovery in postoperative period and was discharged on 8th postoperative day. Prompt diagnosis and surgical management is mandatory to avoid complications.

Keywords: Diaphragmatic hernia, Prolene mesh, Surgery

INTRODUCTION

Penetrating and blunt trauma rarely results into traumatic diaphragmatic hernia which oftenly undergo unrecognized.[1] It may be sometimes associated with traumatic abdominal wall hernia.[2] It is usually missed at the time of first presentation.[3] It is prevalent in 0.8 to 5% of patients of traumatic thoracic injury.[4]

CASE REPORT

A 25 year old male admitted at trauma center at S.M.S Hospital Jaipur with chief complaints of difficulty in breathing since road traffic accident. His heart rate was 110 beats per minute blood pressure was 120/74 mmHg in right upper arm in lying down position, respiratory rate 32 per minute with reduced air entry left side hemithorax. Haematologic and biochemical investigations were normal in the patient. X-ray was done which revealed collapsed lung with bowel in left hemithorax with mediastinal shift towards right side. Chest X-ray of the patient showed collapsed lung along with contents of abdomen in left hemithorax , as depicted in Figure 1.

Patient was stablised and Contrast Enhanced CT Scan of Chest was done which showed abdominal contents in left hemithorax with diaphragmatic injury on left side with no spillage of contents in thoracic cavity. On CT (computed tomography) scan of thorax, herniation of abdominal contents into thoracic cavity was confirmed as shown in Figure 2.

Patient was taken to operation theatre after clearance from the anesthetist. Written informed consent was

sought from the patient before operation. Patient was taken for emergency surgery, left posterolateral thoracotomy was done through 6th intercostal space. On entering the left thoracic cavity lung was found to be collapsed with abdominal contents (spleen, stomach, omentum, small bowel) occupying the space in the left thoracic cavity as depicted in Figure 3.

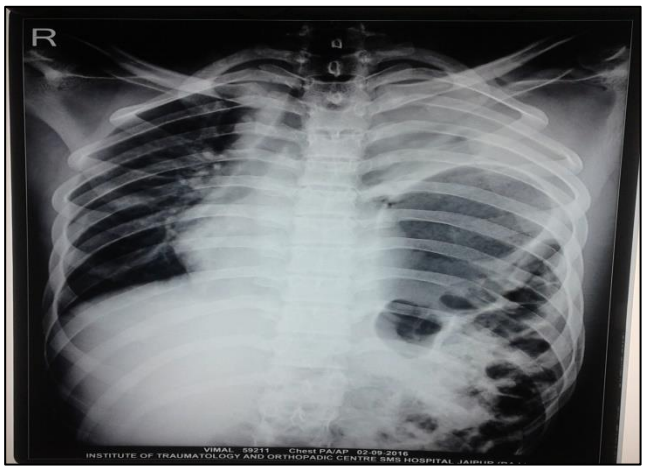

Figure 1: Chest x- ray of the case showing collapsed lung along with contents of abdomen in left hemithorax.

Figure 2: CT-scan of thorax showing collapsed lung and herniation of abdominal contents into thoracic cavity.

The abdominal contents were reduced back into the abdominal cavity with care and a circumferential tear of diaphragm was found with complete avulsion of diaphragm from chest wall anteriorly and laterally. After thorough washing of thoracic cavity with saline, repair was done with prolene mesh as primary repair was not possible due to avulsion of margins from anterior and lateral walls as we can see in Figure 4.

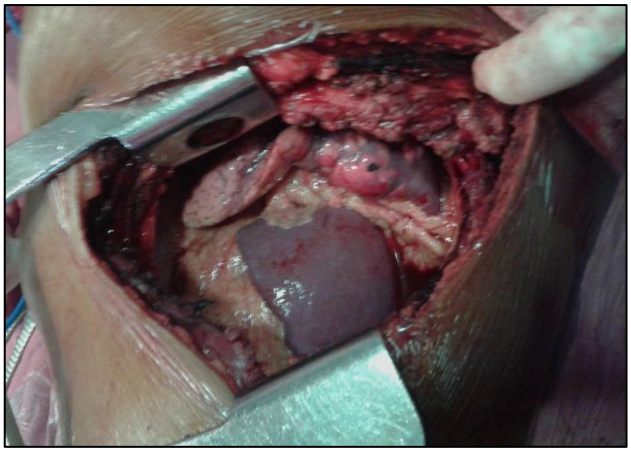

Figure 3: Intraoperative picture showing herniated abdominal contents (spleen, stomach, omentum) along with collapsed lung.

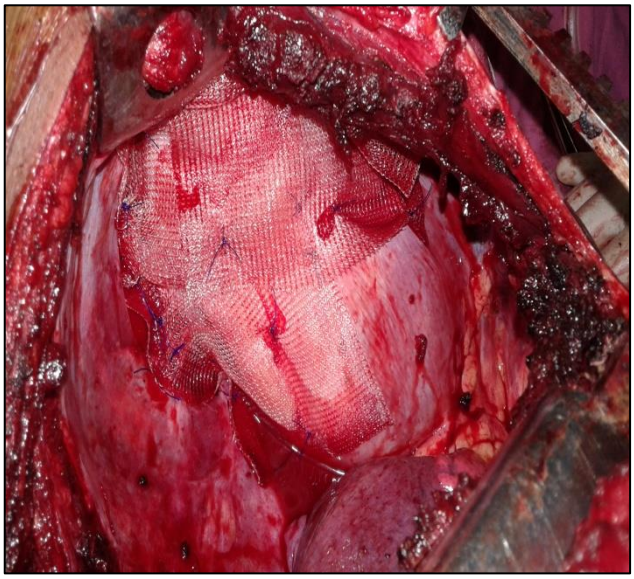

Figure 4: Postoperative picture showing repaired diaphragmatic hernia with prolene mesh.

One left chest-drain was put which was removed on 3rd post-operative day. The patient was put on antibiotics in postoperative period and was started orally from 4th post-operative day after appearance of bowel sounds. The patient showed good recovery in postoperative period and was discharged on 8th postoperative day.

CONCLUSION

Traumatic diaphragmatic hernia should not undergo undiagnosed. Prompt diagnosis and surgical management is mandatory to avoid complications. This article might fulfill the gap in the original research work in this field.

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Ethical approval: Not required

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