

Traumatic Diaphragmatic Hernia

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Abstract

Case Report

Diaphragmatic Hernia may be caused by direct or indirect trauma, and might be overshadowed by an injury to the bony skeleton, central nervous system; lungs or abdominal viscera and the hernia might remain occult for years. Early physical signs and symptoms are minimum before any abdominal organ has penetrated into the thorax. The most serious complication of a diaphragmatic hernia is strangulation should be suspected in front of patient with symptoms of bowel obstruction or pulmonary compression, and a recent or old chest or upper abdomen wound.

Keywords: Diaphragmatic hernia, traumatic, surgery.

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INTRODUCTION

Traumatic diaphragmatic hernia is a rare entity whose diagnosis can easily be missed during the initial evaluation. Through this observation we will highlight the clinical and therapeutic particularities of this disease.

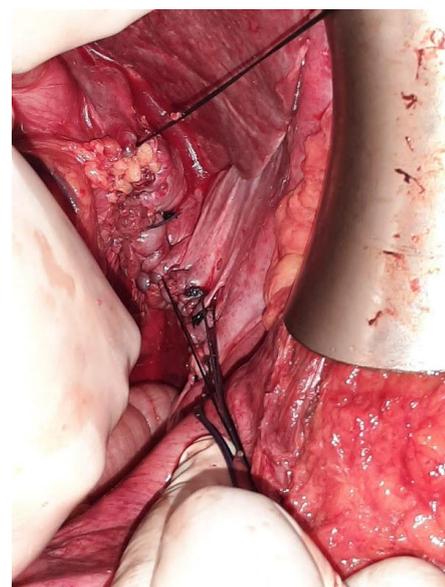
CASE REPORT

A 56 old woman admitted for a management of a blunt chest and abdominal injury. Chest X Ray was

performed showing: elevation of the left hemidiaphragm. A CT scan for the chest and abdominal area revealed: Post traumatic diaphragmatic hernia in the Left (im3). The patient was explored through a midline incision; a herniated stomach in the left side of the thorax was discovered 5cm through the diaphragmatic breach. treatment consisted on reducing the stomach hernia and the stitching of the diaphragmatic breach, with the implementation of chest tubes for the thoracic drainage (im1, 2).



Fig-1: Initial computed tomography of the thoraco-abdomen revealed a large hernia of stomach and bowel through diaphragm



Picture after suture the diaphragm rupture



Peroperative picture of hernia

DISCUSSION

Traumatic diaphragmatic disruption is a common injury most noteworthy as a marker of severe trauma it occurs in 0,8 to 50 % of polytrauma patients , in 80 to 90 % of the cases it is related to d automobile accident victims [1]. It was first described in 1541 by Sennertus who, in a letter to Hildani, described an autopsy finding of a stomach herniating through a diaphragmatic injury incurred 7 months earlier by a self-inflicted stab wound [2]. Pare described in 1579 how "the stomach and intestines are sometimes drawn into the thoracic cavity" after an injury to the diaphragm [3]. He reported on an autopsy in which the left chest contained a strangulated loop of colon that had passed through a defect attributed to a stab wound 8 months before the illness. Bowditch [4] is credited with the first antemortem diagnosis in 1853; Riolfi is thought to have achieved the first successful repair in 1886 [5] The first diagnosis and repair of an acute blunt diaphragmatic rupture was reported in 1900 by Walker[6] who treated a patient crushed by a falling tree.

The striking problem with traumatic diaphragmatic injuries is the frequent difficulty in making the diagnosis. It is ironic that many groups point to its usefulness as a marker of severe injury while, at the same time, demonstrating the ease with which it can be missed. Our finding that only 50% of the diaphragmatic injuries were diagnosed before surgery was consistent with those of numerous other reports that indicate that the majority of chest films are interpreted either as normal or as displaying nonspecific abnormalities (7'8'9). The likelihood of a false-negative chest roentgenogram appears higher in patients with penetrating injuries, a distinction that is probably the consequence of the larger diaphragmatic defects seen in blunt injuries.

The left hemidiaphragm is more commonly involved in blunt or penetrating injuries 70 to 80 % of

the cases. It was reported that this is probably due to the protective effect of the liver for the right hemidiaphragm in blunt trauma, and the fact that most people use their right hand for protection against penetrating trauma.

Traumatic diaphragmatic injuries are difficult to diagnose in emergency settings unless it is already accompanied by herniation of intra-abdominal contents. MRI remains the most reliable, but its accessibility remains poor in the context of emergency.

Once diagnosed, operation of traumatic diaphragmatic injuries is mandatory to reduce the risk of subsequent complications. There are many large series which describe the repair of traumatic diaphragmatic injuries by laparotomy in left injuries, thoracotomy in right injuries due to the hepatic interposition, laparoscopy, or thoracoscopy.

CONCLUSION

Traumatic diaphragmatic hernia is a rare entity. Preoperative diagnosis can be difficult. Chest x-ray can guide the diagnosis, the most efficient CT for left lesions and MRI remains the benchmark exam. The treatment is purely surgical.

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