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Post Traumatic Diaphragmatic Hernia with Intrathoracic Stomach Outlet Complicated by Strangulation in an Adult: About A Case and Review of the Literature

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Abstract **Case Report**

A 65-year-old patient was seen urgently for diffuse abdominal pain of abrupt onset. The physical examination was unremarkable. A CT scan revealed a left-sided posterior median diaphragmatic defect with antropyloric incarceration responsible for gastric stasis surrounded by medial fat infiltration.

Keywords: abrupt onset, diaphragmatic hernia, antropyloric incarceration.

INTRODUCTION

Post-traumatic diaphragmatic hernia is a special case in traumatology, as it may go undetected, and can therefore represent a diagnostic trap. The diagnosis is then made on the occasion of a complication, in particular strangulation. The left diaphragmatic dome is most frequently affected.

CASE REPORT

We report the case of a 65-year-old patient who suffered a left basithoracic stab wound 5 years ago and whose chest X-ray was unremarkable. The patient consulted for abdominal pain and distension with no respiratory signs. A CT scan revealed a strangulated left diaphragmatic hernia containing the antropyloric region (FIG 1, 2 and 3). This strangulation was responsible for major distension of the upstream stomach. The patient underwent emergency laparotomy, which allowed reintegration of the stomach into the peritoneal cavity. The outcome was favourable, with discharge on day 5 and unremarkable follow-up. The possibility of a diaphragmatic hernia should be systematically borne in mind in the event of violent closed thoracoabdominal trauma or a basi-thoracic wound. It is essential to continue monitoring the patient, and to perform a CT scan if there is any doubt.

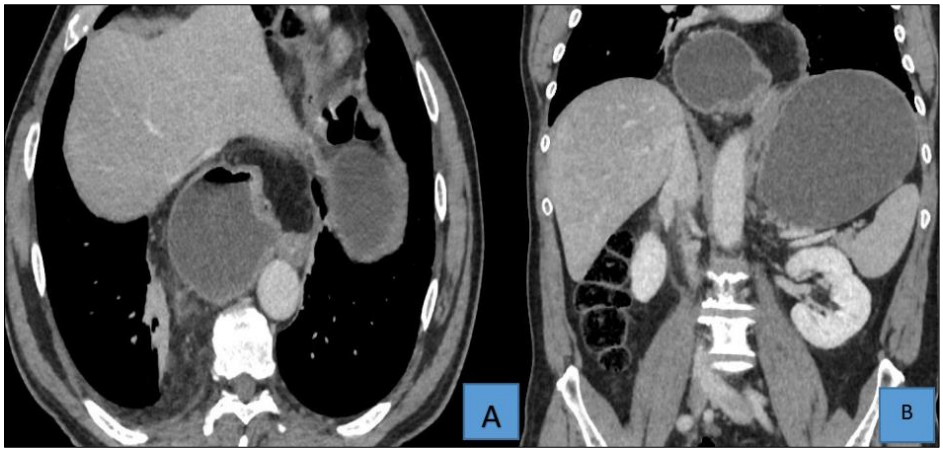

Figure 1, 2 and 3: Thoracoabdominal CT scan with PDC injection at portal time reveals a posterior medial diaphragmatic defect lateralized to the left with antropyloric incarceration responsible for a high occlusion

DISCUSSION

Most diaphragmatic ruptures are caused by thoracoabdominal trauma. The hyper-pressure caused by thoracoabdominal trauma will press the abdominal viscera against the diaphragm, tearing it from the hiatal orifice towards the outer part of the diaphragm. Intra-thoracic passage of abdominal organs through the tear will expose the patient, early or late, to cardiopulmonary complications (compression of pulmonary and mediastinal structures) and digestive complications (strangulation of viscera at the orifice of the diaphragm, leading to viscera perforation).

This diaphragmatic rupture may be found early in the course of a violent trauma, with immediately revealing digestive signs (abdominal pain, vomiting), respiratory signs (chest pain, dyspnea, cough) or, more rarely, cardiac signs (palpitations, pseudoanginal pain). Sometimes, as was the case in our study, the diagnosis may be made late in the course of a sudden onset of abdominal signs (epigastric pain, recurrent occlusion, strangulation, reflux) or respiratory signs (recurrent infections due to parenchymal compression, dyspnea increased by meals). Around 85% of strangulated diaphragmatic hernias occur within three years of the trauma. Diagnosis is based on medical imaging. In typical cases, chest X-rays show an intra-thoracic digestive structure, but this is not sufficient (28-70% of ruptures detected).

The diagnosis is confirmed by thoracic CT scan and, above all, magnetic resonance imaging (MRI).

Pneumothorax is the main differential diagnosis, and there are various surgical modalities for the treatment of diaphragmatic rupture. At present, the thoracotomy used in our case appears to be the best approach for late-diagnosed left diaphragmatic rupture in terms of exposure, and facilitates the release of pleuro-mediastinum-diaphragmatic adhesions which are often significant at this level). The abdominal approach is the preferred route for lesions operated on in emergency, offering better control of the reduced organs and better access to the organs.

CONCLUSION

Diaphragmatic hernia is a rare cause of intestinal obstruction in adults. The diagnosis should therefore be made in the presence of any poorly explained respiratory or digestive symptoms. Standard radiography is not sufficiently reliable for positive diagnosis of the hernia, nor for its strangulation, hence the major role of thoraco-abdominal CT scanning, which may reveal a digestive complication requiring emergency intervention.

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