TRAUMATIC DIAPHRAGMATIC HERNIA AND ASSOCIATED CHILAIDITI SYNDROME: CASE REPORT AND LITERATURE REVIEW

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INTRODUCTION

Traumatic diaphragmatic hernia is a rare disease that occurs in 0.8% to 6% of blunt trauma and in more than 17% of penetrating thoracoabdominal trauma (3,4). It was first described by Sennertrus in 1541 (1). It is defined as the displacement of the intra-abdominal organs towards the thorax through a pathological hole in the diaphragm as a result of trauma (4,6). The most affected side is the left side in 69% of cases, 24% on the right side and 15% bilateral (4). The most common associated symptoms are dyspnea, chest pain, abdominal distension, nausea and vomiting, which can progress to cardiorespiratory failure and/or strangulation of the abdominal viscera within the chest, complications that increase mortality, reported in a range between 5-51% (1,2,3). The abdominal organs that most frequently herniate into the thoracic cavity are the stomach, colon, omentum, small intestine, spleen, liver, and kidney (1,3,6). For the management of this pathology, primary repair with suture or coverage of the defect with synthetic mesh through laparotomy or thoracotomy are described as standard procedures, with the laparoscopic approach becoming relevant in the last decade, being today the most performed (5.6).

CLINICAL CASE

- ✓ 52-year-old male.
- ✓ History of chest trauma by a sharp object 30 years ago.
- ✓ Abdominal pain of 3 days of evolution, colic type, beginning in the mesogastrium with subsequent generalization in the abdomen, classified as 8 out of 10 on an analog pain scale, continuous, accompanied by unquantified fever, nausea, vomiting of gastric content on 8 occasions last 12 hours, absence of gas channeling and evacuations of 3 days of evolution.

OBJECTIVE

To present a case of traumatic diaphragmatic hernia with associated Chilaiditi syndrome, as well as to remember its usual clinical presentation and surgical management modalities available for this clinical entity.

On directed physical examination:

- ✓Chest with increased respiratory rate, decreased vesicular murmur in the right hemithorax.
- ✓Abdomen with decreased peristalsis in the right hemiabdomen, soft, depressible, painful on palpation of the right hemiabdomen, with no signs of peritoneal irritation on arrival.

Laboratory and imaging studies are requested, the chest X-ray showed air density interposed between the right hemidiaphragm and the corresponding liver with intestinal loops (Figure 1). In the presence of Chilaititi syndrome, a simple abdominal tomography was performed, which revealed discontinuity of the right hemidiaphragm with intrathoracic herniation of the colon (Figure 2).

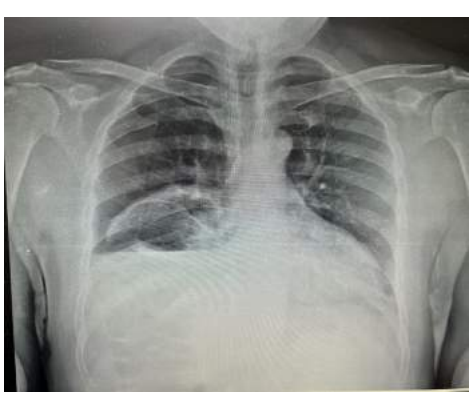


Figure 1



Figure 2

In his secondary evaluation after the results, he presented marked ventilatory effort, increased abdominal pain and data suggestive of peritoneal irritation, with laboratories recorded in Table 1:

Leukocytes 18.49x10^3 /uL	**Platelets 241.8x10^3 /uL**	**Potassium 3.8 mEq/L**	**Lactate 2.4 mmol/L**
Neutrophils 87.3%	**Glucose 140 mg/dL**	**pH 7.44**	**HCO3 34 mmol/L**
Hemoglobin 17.98 g/dL	**Lactic dehydrogenase 192 U/L**	**pO2 52 mmHg**	**Base excess 9.8 mmol/L**
Hematocrit 50.7%	**Sodium 143 mEq/L**	**pCO2 50 mmHg**	**fiO2 88%**

Surgical time is decided for exploratory laparotomy where a 6 cm diaphragmatic hernial ring is found with 15 cm of transverse colon and ischemic omentum in the right rib cage (Figure 3 and 4), which are reduced and resected, washed and serohematic content is aspirated of the rib cage, a thoracostomy tube was placed at the level of the sixth intercostal arch and the hernial defect was closed with vycril from the 1st anchored cord (Figure 5).



Figure 3

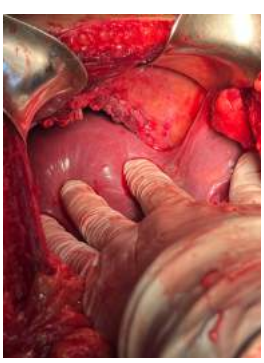


Figure 5



Figure 4

DISCUSSION

In our patient, the herniated organs were the colon and omentum, thus corroborating the frequency reported in the literature. Early diagnosis was key to the favorable evolution of this patient, so having clinical suspicion in a scenario that shares respiratory and abdominal symptoms, as well as a directed questioning, become our most useful tool. Surgical management was determined according to the resources available in our hospital unit, and despite laparoscopic management being the route of choice, we must know and develop enough surgical skill to solve this pathology by open surgery techniques, in order to achieve successful outcomes.

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