

Combined intercostal-transdiaphragmatic-abdominal wall hernia

Martínez-López P.¹, Verdaguer-Tremolosa M.¹, Rodrigues-Gonçalves V.¹, Martín-Del-Rey A.¹, López-Cano M.¹

¹Hospital Universitari Vall d'Hebron – Barcelona (Spain)



AIM

Intercostal, transdiaphragmatic, and abdominal wall hernias are exceptionally rare due to the extensive nature of the hernia and involvement of multiple compartments. They usually occur after trauma and, less frequently, after an increase in intrathoracic pressure during episodes of severe cough.

CASE REPORT



72 years old

Former smoker, arterial hypertension, diabetes mellitus and chronic obstructive pulmonary disease.

- Clinical symptoms

Nausea and dyspnea + progressively increasing left-sided thoracic and abdominal swelling after an episode of intense cough.

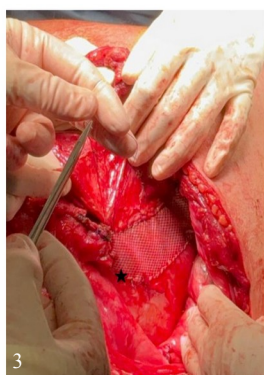
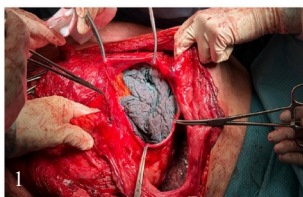
CT scan

Intercostal hernia between the 8th and 9th ribs, extending transdiaphragmatic and involving the lateral abdominal wall, whose contents are the stomach, colon and small bowel.



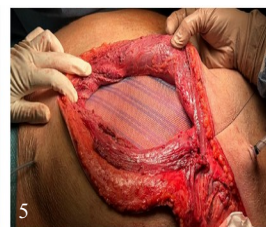
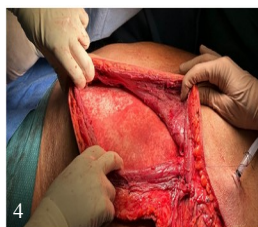
Intraoperative findings

- 9x9 cm defect in the internal oblique and transversus abdominis muscles.
- Costal cartilage disinsertion between the 8th and 9th ribs.
- 8 cm diaphragmatic defect. (Fig. 1)



Left thoraco-abdominal incision

- Diaphragmatic defect closure + reinforced with a Synecor mesh. (Fig. 2, 3)
- Preperitoneal hernioplasty with Bio-A and polypropylene mesh. (Fig. 4, 5)
- Intercostal space and the communication between the preperitoneal lateral space and the thoracic cavity closure.



Hospital admission without incident. At one and 6 months follow-up, the only finding was a minor seroma.

DISCUSSION

It is a rare pathology and much of the existing literature consists of case reports. Systematic reviews on this topic highlight the absence of a standardised classification system to guide the management. The surgical approach is not yet standardised, but it is essential to repair all components of the defect to minimise recurrence and postoperative pain. Open surgery via thoracic or thoracoabdominal incision remains the most common approach. Early management in a multidisciplinary manner can prevent complications such as acute incarceration, which significantly increases morbidity and mortality.