







# Hepatopulmonary Fusion in Right Congenital Diaphragmatic Hernia: Can Conservative Approach Win?

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## Introduction

Hepatopulmonary fusion (HPF) is a **rare malformation** <u>associated with right-sided congenital diaphragmatic</u> <u>hernia</u> (CDH).

Preoperative diagnosis is uncommon and often made intraoperatively.

The optimal management strategy remains controversial.

### Aim

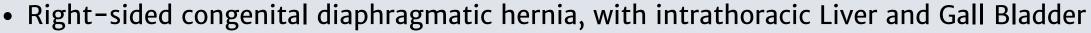
To present the case of a **term newborn** from a twin pregnancy, with a **prenatal diagnosis of right-sided CDH**, **poor prognostic indicators**, and congenital heart disease.

## Case Report



Dichorionic Twin - Pregnancy

#### Pre-Natal Diagnosis:







Do D1 D2 D9

Apgar 7/8/8 3100g (P50-90) VM + FiO2 100% (3 min)

#### <u>Ultrassound study:</u>

- Intrathoracic right hepatic lobe
- Septal AV defect with left-right atrial shunt + systemic pulmonary hypertension

#### Hypoxemia + Bradicardia

Thoracic compressions +

**1** ventilatory support

Multidisciplinary reunion: Start ECMO: not possible

#### **Exploratory Laparotomy:**

- CDH type C
- Extensive hepatopulmonary fusion
- Intrathoracic liver extensively adhered to posterior and mediastinal planes
- Right pulmonary hypoplasia

Surgery Terminated

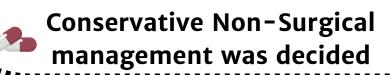


#### D10 D50 D110

#### <u> Angio-CT</u>

- Early hepatic highlighting
- Areas of hepatic vascularization in continuity with pulmonary vessels
- Morphological changes to Vena Cava, Azygos and hemiazygos vein

Compatible with Hepatopulmonary fusion with hepato-pulmonary shunt



Elective
extubation to
high-flux
therapy, and
then BiPAP

Discharged on Nasal Canula O2 2L/min and nocturnal BiPAP

## At 3 years of age: No ventilatory support Gradual psychomotor development

Conclusion

Hepatopulmonary fusion with right-sided CDH carries high perioperative mortality.

The **extent of fused parenchyma** and **vascular anomalies** are emerging as <u>critical prognostic markers</u> **Hemodynamic compromise** due to altered vascular dynamics can highlight the **potential role for conservative management** in selected cases.

Long-term follow-up is essential to monitor vascular dynamics and consider interventions if necessary.

bibliography: Almaramhy, H. H. (2018). Hepatopulmonary fusion associated with right-sided congenital diaphragmatic hernia: management of this rare anomaly and a review of the literature. Journal of International Medical Research, 46(12), 5278-5284. Alomar, K.et. al. (2023). A rare case of hepatopulmonary fusion associated with a right congenital diaphragmatic hernia: Case report and review of the literature. International Journal of Surgery Case Reports, 111, 108845. Franco, M. et. al (2023). Survival after a two-stage surgical approach in Hepatopulmonary fusion in a newborn. An uncommon intraoperatory finding durin