

## A Comparative Analysis between Right and Left Congenital Diaphragmatic Hernias

Mohamed Zouari<sup>1</sup>, \*Hamdi Louati<sup>1</sup>, Amal Ben Hamad<sup>2</sup>, Imen Moalla<sup>2</sup>, Ahmed Khalil Ben Abdallah<sup>1</sup>, Saloua Ammar<sup>1</sup>, Abdeltif Gargouri<sup>2</sup>, Riadh Mhiri<sup>1</sup>

<sup>1</sup>Department of Pediatric Surgery, Hedi Chaker Hospital, Sfax, Tunisia.

<sup>2</sup>Department of Neonatology, Hedi Chaker Hospital, Sfax, Tunisia.

### Dear Editor-in-Chief,

Congenital diaphragmatic hernia (CDH) is a rare congenital anomaly of the diaphragm with an incidence of 1:2,000-5,000 of live births (1). The diaphragmatic defect is located on the left side in 85% of cases, whereas right-sided CDH occurs in 15% of cases (2). Right CDH is associated with higher mortality, and morbidity as compared to left CDH (3-5). This study retrospectively evaluated patients who had been operated on for CDH at our department of Pediatric Surgery between January 2013 and December 2016. The Demographic Data and outcomes of right CDH cases (Group 1) were compared with left CDH cases (Group 2). During the 5-year period, 35 neonates were operated on for CDH. Of these, six cases were right CDH with 29 left CDH cases. Twenty-two patients (63%) were male, and 37% were female. Antenatal diagnosis was performed in only 20% of the cases (n=7).

The liver was herniated into the right chest in 5/6 cases of right CDH, whereas the stomach was herniated into the thoracic cavity in 28/29 cases of left CDH. The average gestational age at delivery was 38.2 weeks (37.9 weeks Group 1 patients versus 39.6 weeks in Group 2 patients;  $p=0.008$ ). The mean operative time was  $101.8 \pm 11.5$  min for right CDH and  $91.8 \pm 10.7$  for left CDH ( $p = 0.049$ ). Postoperative survival was 15/35 (3/6 right CDH versus 12/29 left CDH). There was no statistically significant difference between the two groups in terms of birth weight ( $p=0.821$ ), length of stay in the Intensive Care Unit (ICU) ( $p=0.539$ ), and postoperative survival ( $p>0.99$ ) (**Table.1**). The outcomes of the right CDH compared with the left CDH cases operated on during our 5-year-study period were comparable. A multi centric study with larger number of patients needs to be done to compare the mortality and morbidity of right CDH and left CDH cases.

**Key Words:** Children, Congenital diaphragmatic hernia, Tunisia.

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### \*Corresponding Author:

Hamdi Louati, Department of Pediatric Surgery, Hedi Chaker Hospital, 30219 Sfax, Tunisia.

Email: [drhamdilouati85@yahoo.com](mailto:drhamdilouati85@yahoo.com)

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**Table-1:** Demographic data and outcomes in right versus left CDH

Variables	Right CDH (n=6) Number (%)	Left CDH (n=29) Number (%)	P-value
Prenatal Diagnosis	0 (0%)	7 (26.9%)	0.311
Intrathoracic liver position	5 (83.3%)	0 (0%)	<0.001
Intrathoracic stomach position	0 (0%)	28 (96.5%)	<0.001
Gestational age at delivery (weeks)	37.9±1.3	39.6±1.4	0.008
Birth weight (grams)	2955.5	3006.7	0.821
Length of stay in the ICU (days)	4.8±4.1	6±5.9	0.539
Mean duration of surgery (min)	101.8±11.5	91.8±10.7	0.049
Postoperative survival	3 (50%)	12 (41.4%)	> 0.99

CDH: Congenital diaphragmatic hernia.

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