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Correspondence

Correspondence: predictors of prognosis in neonates with congenital diaphragmatic hernia – Authors' reply

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This corrispondence refers to the following article:
Granjo Morais C, Rocha G, Flor-de-Lima F, Éden P, Fragoso AC, Guimarães H. Predictors of prognosis in neonates with congenital diaphragmatic hernia: experience of 12 years. J Pediatr Neonat Individual Med. 2017;6(1):e060126. doi: 10.7363/060126.

Comments can be found in the following article:
Kumar J. Correspondence: predictors of prognosis in neonates with congenital diaphragmatic hernia. J Pediatr Neonat Individual Med. 2017;6(1):e060139. doi: 10.7363/060139.

Keywords

Congenital diaphragmatic hernia, congenital abnormality, newborn infant, prognosis, mortality, morbidity.

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Dear Editor,

We would like to start by thanking the author for his kind correspondence and his comments [1] on our paper [2]. In response to his questions:

1. We excluded cases of anterior/central congenital diaphragmatic hernia (CDH) from this study due to their distinct developmental background compared with posterolateral CDH (mentioned in the introduction of our work) [3, 4].
2. Since diagnosis and management of CDH cases suffered some changes in the last decade, it was difficult to select a period of study with adequate cohort size and the least possible bias. In order to compromise, we selected the period of 2003-2014 since all neonates in our NICU were treated with the same post-natal management protocol during this interval.
3. The protocol of CDH postnatal management used in our unit is based on *The CDH EURO Consortium Consensus* where it is stated that: "If preductal saturation falls below 85% and/or if there are signs of poor organ perfusion, treatment of pulmonary hypertension should be initiated. The first choice would be iNO, which is a pulmonary vasodilator. In neonates with pulmonary hypertension of the newborn (PPHN) or severe hypoxic respiratory failure, iNO improves oxygenation and decreases the need for ECMO. At an oxygenation index of 20 or higher and/or a pre- and postductal saturation difference of 10% or more, iNO may be given for at least 1 h" [5]. These guidelines were also referred to in a previous version of the consensus [6].
4. It is true that current evidence does not favor paralysis. Of the 15 neonates who received neuromuscular-blocking agents, only 5 were curarized for several days until their death. The remaining were paralyzed for 1-2 days in the post-operative period or received a limited number of infusions. This practice was more frequent from 2003 to 2007. Gestational age at diagnosis was a variable of our work; however, we did not categorize it in trimesters. Although we did not obtain a p-value < 0.05, it should be noted that survivors presented a more elevated median of gestational age at diagnosis than non-survivors.
5. In the given example of neonates who underwent patch repairs: since all survivors were operated, there was a bias when we compared several variables between operated with non-operated newborns (in terms of mortality rate). To understand whether the surgical technique *per se* was relevant to prognosis, we compared the relevance of prosthetic patch usage only in the group of operated newborns (a total of 41 cases). The same logic was applied with other variables. If we had used the same denominators, similar results in terms of significance ($p < 0.05$) would have been obtained, as tested by researchers (statistical data not reported in our paper).
6. On logistic regression, surgical repair with prosthetic patch showed an odds ratio (OR) of 15, as it is reported in the last paragraph of our results (page 6). This value is not presented in any of our tables of results, only in the text. OR was calculated for each variable, even though these values were not displayed in our paper, so that our table of results would not become too extensive. The 95% confidence interval of OR is 0.98-228.9 with a p-value of 0.049.

Declaration of interest

The Authors declare that there is no conflict of interest.

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