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Correspondence

Correspondence: predictors of prognosis in neonates with congenital diaphragmatic hernia

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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.

Authors' reply can be found in the following article:
Granjo Morais C, Rocha G, Flor-de-Lima F, Éden P, Fragoso AC, Guimarães H. Correspondence: predictors of prognosis in neonates with congenital diaphragmatic hernia – Authors' reply. J Pediatr Neonat Individual Med. 2017;6(1):e060140. doi: 10.7363/060140.

Keywords

Congenital diaphragmatic hernia, survival, pulmonary hypertension.

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Dear Editor,

We read with great interest the article by Granjo Morais et al. [1] published in the latest issue of your journal and found it very useful. First, we would like to commend the authors for their endeavor. We have the following comments regarding the methodological issues and unit practices in the management of congenital diaphragmatic hernia (CDH) which require further clarification by the authors for the benefit of the readers of JPNIM:

1. Authors excluded 5 cases of anterior/central CDH from the study, but didn't state reason for their exclusion. The exclusion of such cases will create bias in the study.
2. This study population is a mixture of 12 years (2003-2014) and there are lots of advances in understanding of the pathophysiology and management of CDH. Survival has improved greatly over the last decade. One may wonder how can one compare and interpret whole data together and whether the high mortality rate in this particular cohort is because most of the study population was represented by old era babies.
3. In the present study all babies with echo-cardiographic proven pulmonary hypertension and oxygenation index > 20 were started on inhaled nitric oxide (iNO); however, current evidence doesn't support this practice. Putnam et al. showed that iNO use in patients with CDH may be associated with increased mortality [2]. Latest Cochrane by Barrington et al. published in 2017 also didn't support use of iNO in pulmonary arterial hypertension with CDH [3].
4. In the present study, 28% of babies were paralyzed, which is too high and current evidence doesn't favor this practice. As per current literature paralysis should be avoided, as it may have negative adverse effects on ventilation [4]. In present study most of the cases were detected in late third trimester so prognosis should be good; however, it was not so. What could be the reasons for this difference?
5. Clinical characteristics between survivors and non-survivors are compared by univariate analysis. In individual characteristics, percentages are given in parenthesis and are among total of survivors or non-survivors (i.e. the denominator is different for each characteristic). However, for comparative analysis of a character one should have the same denominator. Due to different denominators fallacious p-values are derived. For example, the babies who underwent patch repairs are equally distributed between survivors and non-survivors (6 each); however, the authors got a p-value of 0.04 and concluded that it was statistically different in the two groups. The same holds true for other variables too.
6. Results also mention that on logistic regression surgical repair with prosthetic patch was the only factor with a predictive value for death during NICU stay, with an odds ratio (OR) of 15 (95% CI 0.98-228.9). However, nowhere in results authors showed OR. Secondly, 95% confidence interval of OR is on both sides of 1.0 so it can show only "trend" towards increased death.

Declaration of interest

The Author declares that there is no conflict of interest.

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3. Barrington KJ, Finer N, Pennaforte T, Altit G. Nitric oxide for respiratory failure in infants born at or near term. Cochrane Database Syst Rev. 2017;(1):CD000399.
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