

Correspondence

To the Editors

Estimation of biomarkers in asphyxiated full term neonates with special reference to serum lactate dehydrogenase, aspartate transaminase and alanine transaminase

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(Key words: Biomarkers, birth asphyxia, AST, ALT)

Overall, an article titled "Estimation of biomarkers in asphyxiated full term neonates with special reference to serum lactate dehydrogenase, aspartate transaminase and alanine transaminase" written by Rajeesh CH *et al*¹ is clear and concise. There are a few minor issues related to the article which are as follows: In the study, sample size was 31 calculated but 30 neonates were included in the study. Whether one neonate was excluded from the study or not taken? The author classified the birth asphyxia according to the Apgar score but in methodology section not mentioned in detail how he classified into three types i.e. mild, moderate and severe birth asphyxia. All severe birth asphyxiated babies expired in the study group. Were any abnormalities found on neuroimaging of these neonates? In table 4, HIE stage (J) is compared with HIE stage (I) in which grade 3 is compared with 3, which is not clear.

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Reference

1. Rajeesh CH, Sahana KS, Prakash RMS. Estimation of biomarkers in asphyxiated full term neonates with special reference to serum lactate dehydrogenase, aspartate transaminase and alanine transaminase. *Sri Lanka Journal of Child Health* 2020; 49(2): 162–9.

Response by authors of article

To the Editors

We thank the reader for showing interest in our study. The queries are addressed below:

1. Sample size calculated was 31. But 1 baby was excluded since we could not obtain all the 3 values at different point times. Incomplete information of one case will lead to bias in data. Statistician was consulted regarding the same including post power analysis and it was found that there is no change in power of study which was fixed prior. Hence we continued with the analysis of 30 samples.
2. Classification of birth asphyxia into three types was done according to ICD -10 WHO 2016 VERSION (P21) based on the APGAR score¹. All babies with severe birth asphyxia developed HIE stage 3.
3. Neurosonogram showed cephalhaematoma in 2 babies along with intraventricular haemorrhage. 1 baby had cystic periventricular leukomalacia. MRI brain could not be done in any of the babies due to poor general condition
4. In table 4, we have done comparison between asphyxiated babies without HIE (represented as 0) and stages 1, 2 and 3 of HIE. Similarly stage 1 was compared with stage 2 and 3 and stage 2 with stage 3 (row wise distribution). There is a mistake in representing it, as rows were not separated accordingly due to the technical issue and we regret for the same. Following is the correct table.

Table 4: Multiple comparison of serum aspartate transaminase (AST) at different time points with the stages of hypoxic ischaemic encephalopathy (HIE)

Serum AST	(I)HIE stage	(J) HIE stage	Mean difference (I-J)	Standard error	p-value
AST between 18 and 24 hours	0	1	-10.200	100.012	1.000
		2	-49.364	98.958	0.959
		3	-261.333	107.431	0.096
	1	2	-39.164	66.383	0.934
		3	-251.133*	78.456	0.018*
	2	3	-211.970	77.107	0.049*

References

1. World Health Organisation. ICD-10 Version: 2016. Available from: <http://apps.who.int/classifications/icd10/browse/2016/en#/P20>.

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