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CORRESPONDENCE

Oral vitamin A for prevention of bronchopulmonary dysplasia

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Dear Sir,

We read the article by Basu et al. [1] with great interest. It is noteworthy that they have addressed a persistent problem with a modified solution for reducing BPD in VLBW infants. However, we have a few queries.

1. First, an error has been noted in sample size calculation. The authors have calculated a sample size of 178 using online power/sample size calculator (http://www.stat.ubc.ca/~rollin/stats/ssize/b2.html). However, the sample size was much higher ($n = 452$) when recalculated using the above mentioned calculator. We tried to calculate the power for the specified sample, which came out as 45%.

Also, the sample size has been calculated assuming the incidence of primary outcome as 64%. However in this trial, the actual incidence of only 25% was observed in the control group. Had the sample size been calculated from this incidence, a much higher sample of 2188 was required for the above-specified effect size and power. It would be useful if the authors can provide the reason for this huge difference in outcome during the study period from previous year data; whether it is the result of some change in essential newborn practices and ventilator strategies or a part of some quality improvement project?

2. Another concern is that the total duration (median as well as the inter-quartile range) of CPAP and oxygen requirement is much less as compared with the incidence of oxygen requirement at 28 days. Whether this total duration of oxygen requirement included the days on mechanical ventilation or on CPAP?

3. Lastly, the osmolality of the aqueous oral vitamin A solution used in the trial is not mentioned, since osmolality is a key factor that needs to be taken into consideration when choosing an oral solution for preterm infants [2]. This becomes more important in light of four times the incidence of necrotizing enterocolitis in the control group though it was not statistically significant.

Authors' contributions Dr. Bharti Yadav: drafted the initial manuscript and approved the final manuscript as submitted.

Dr. Rohit Sasidharan: revised and critically reviewed the manuscript and approved the final manuscript as submitted.

Dr. Neeraj Gupta: critically reviewed the manuscript and approved the final manuscript as submitted.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

References

1. Basu S, Khanna P, Srivastava R, Kumar A (2019) Oral vitamin A supplementation in very low birth weight neonates: a randomized controlled trial. Eur J Pediatr 178(8):1255–65
2. Kumar RK, Singhal A, Vaidya U, Banerjee S, Anwar F, Rao S (2017) Optimizing nutrition in preterm low birth weight infants—consensus summary. Front Nutr 4:20

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