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CORRESPONDENCE

Oral vitamin A for prevention of mortality and bronchopulmonary dysplasia

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To the Editor,

Dear Sir,

Thank you for showing interest in the article by Basu et al. [1]:

1. The sample size calculation of the study was based on the combined incidence of death and bronchopulmonary dysplasia (BPD) in very low birth weight neonates requiring respiratory support at 24 h of age in the previous year, which was 64%. We assumed a similar incidence in the placebo group during the study period and expected a relative risk reduction of 20%, i.e., an incidence of 51.2% [64 − (20% of 64 = 12.8)] in the vitamin A group. Using a 1-sided test, approximating proportion 1 (p1) and proportion 2 (p2) to be 0.6 and 0.5 for placebo and vitamin A group, respectively (ignoring second decibels), with a confidence level of 95% and power of 80%, the sample size calculated was 178 in online power/sample size calculator (http://www.stat.ubc.ca/~rollin/stats/ssize/b2.html). Adding an attrition of 10%, total sample size calculated was 196 (as mentioned in the study).

   It is difficult to explain why the primary outcome (combined incidence of mortality or BPD) during the study period was less compared with the previous year. There were no significant changes in neonatal care practices, ventilatory strategies, or any systematic quality improvement initiative in the unit during the study period.
2. BPD was defined as an oxygen requirement for 28 days. Only 2 infants in the vitamin A group and 9 in the placebo group needed oxygen for 28 days. In majority of neonates, oxygen was used for a short period, thus accounting for an overall shorter duration of oxygen requirement in the study cohort.
3. The osmolality of the aqueous oral vitamin A solution was not measured, as we did not have the facility in our hospital. It is difficult to say whether there was any association of necrotising enterocolitis with vitamin A supplementation due to small number of the incidence. Studies with a large sample size are needed to confirm or refute this observation.

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Authors' contributions Prof. Sriparna Basu and Prof. Ashok Kumar drafted the initial manuscript. Dr. Parul Khanna and Dr. Ragini Srivastava reviewed and revised the manuscript. All authors approved the final manuscript as submitted and agree to the content.

Compliance with ethical standards

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

Reference

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 178:1255–1265