Zinc Supplementation for Growth of Preterm Infants

I have serious concerns regarding the methodology and conclusions of the study by Islam, et al. [1] published in October 2010 issue on the effect of zinc on the growth of preterm babies. Contrary to the author’s statement, the study by Penny, et al. [2] did not find any difference in growth in Peruvian children. Islam’s study claims to be a double blinded randomized controlled trial (RCT) but masking was questionable. Allocation concealment was also not described. The study objective was vague i.e. difference in “growth” (and not length/weight for age) in premature babies. The sample size was calculated on incidence of low birthweight (and not prematurity) instead of difference in a growth parameter, and was not powered to estimate a mean difference of length/weight. A table of comparison of baseline characteristics (with the 95% CI) was absent. The postnatal age, gestational age or other baseline growth confounders were not adjusted for in the analysis. Enrolment age ranged from 7-21 days but the reason for this variability or distribution between the two groups was not stated. Adherence to medications on follow up, the definition of “respiratory illness” or “diarrhea” or their evaluation was not explained. The frequency of vomiting and loose stools and how they distinguished between “loose stools” and “diarrhea” is unclear. The author states that 15 infants were excluded from growth analysis but Table II shows otherwise. Both intention to treat and per protocol analysis should have been conducted. In absence of a sound RCT (or mention of a trial registration), the authors concluded the beneficial impact of zinc on growth of LBW preterm babies (although the study was conducted in appropriate for age preterm babies), on reduction of diarrhea and also proposed its recommendation. Although two meta-analysis have reported the beneficial effect of zinc supplementation on length of infants but there has been significant heterogeneity among studies [3,4]. Subsequently an Indian study in 2052 term LBWs showed no growth impact of zinc [5]. So more evidence is needed to evaluate zinc in low birthweights. It is also suggested that authors and reviewers adhere to the CONSORT statements before publishing such RCTs. Presumably a study of negative results with such methodological limitations (which the authors failed to discuss) may not have been published.

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REFERENCES