

prevalence of VDD (83.1%) among 154 critically-ill children. They noted no differences in severity of illness at admission, mortality, and duration of PICU stay among vitamin D-deficient and non-deficient children. The high prevalence of VDD in this study cohort could be due to high prevalence of malnutrition (65.6%) and presence of chronic illness (55.4%), which directly or indirectly could have influenced vitamin D status. It could have been better if authors had included matched controls to account for the baseline prevalence of VDD in the given population.

Recently, we demonstrated that the prevalence of VDD (level <20 ng/mL) among 124 critically-ill children with sepsis and 338 healthy controls was 50.8% and 40.2%, respectively ($P=0.04$) [4]. We also noted that the severity of illness assessed by PRISM III and SOFA scores was not significantly different between cases with VDD and those with non-deficient levels of vitamin D, though the PRISM III score was slightly higher in cases with VDD. Also, there was a trend toward increased occurrence of septic shock and MODS, requirement for catecholamines and mechanical ventilation, development of healthcare associated infections, and occurrence of hypocalcemia in cases with VDD; though the difference was not statistically significant. Whereas Shah, *et al.* [5] noted lower mortality, shorter PICU stay, lesser requirement and duration of mechanical ventilation, and lesser incidence of ARDS in vitamin D-deficient cases. This was in contrast to previous studies [1-4]. Shah, *et al.* [5] mistakenly mentioned non-vitamin D deficient children as 19.8% in abstract section, which should be 16.9%.

Larger multicentric studies are needed to determine the prevalence of VDD, association of VDD with clinically important outcomes, and effect of supplementation of vitamin D in critically-ill children. Till then, it is important for critical care physicians to carefully examine the results of available studies before clinical applicability.

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AUTHORS' REPLY

We thank the authors for the interest in our article [1]. High prevalence of malnutrition and presence of chronic illness in our study population could have influenced vitamin D level, and we therefore agree with their suggestion to include matched control to assess the baseline prevalence of vitamin D deficiency. We considered this thought during the process of study design, but from ethical standpoint, it was difficult to draw blood samples for vitamin D level alone in apparently healthy children.

We observed a trend towards lower mortality, shorter duration of PICU stay, and lesser requirement and duration of mechanical ventilation in vitamin D-deficient children compared to that of non-vitamin D deficient. However, none of these associations reached statistical significance. Therefore, we were unable to draw a firm conclusion on the association. We regret the printing error in the abstract.

Due to limited studies in children, and differences in the result on association of vitamin D level with clinical outcomes from various studies, we agree with the authors' concluding remark on being cautious on interpretation of the result of studies. We certainly need trials to determine if vitamin D supplementation is beneficial in critically ill children.

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