

PROBIOTICS FOR PREVENTING NECROTIZING ENTEROCOLITIS IN PRETERM NEONATES- A META-ANALYSIS PERSPECTIVE

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Background: Results of our updated meta-analysis indicate that probiotic supplementation significantly reduces all cause mortality and definite NEC by as much as 60% in preterm neonates, without significant adverse effects. Experts have suggested that the current evidence justifies a change in practice in favour of probiotic supplementation if a suitable product is available. However, many other issues (e.g. pooling data in presence of heterogeneity, pitfalls of trial sequential analysis -TSA, lack of data for ELBW neonates) have been raised to oppose such a change in practice.

Aim: To address the following issues from the perspective of meta-analysis: Validity of methodology including TSA, lack of data for ELBW neonates, reproducibility in different settings, and the role of breast milk.

Methods: Data from our recently updated meta-analysis was reviewed. A comprehensive literature search was conducted using Google, PubMed, EMBASE, and proceedings of scientific conferences without restricting the study design. Subgroup analyses were conducted to address selected issues.

Results: Evidence from two large cohort studies indicated safety of long-term routine use of probiotics and benefits in the setting of low baseline rates of NEC. Data from cohort studies and subgroup analyses showed reduction of NEC in ELBW and breast milk fed preterm neonates.

Conclusion: The results of our updated Meta analysis are valid considering the currently accepted methodology for such studies. We provide additional evidence for the safety and efficacy of probiotics in preterm neonates.