Feeding Intolerance in Preterm Infants in Africa and Asia continent: A Systematic review and meta-analysis

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Abstract

Background: Feeding intolerance in preterm infants has several short-term and long-term complications. While several studies have examined the burden of feeding intolerance in preterm infants in Africa and Asia, the results have been inconsistent and inconclusive. Therefore, there is a need to generate pooled evidence to recognize the burden of feeding intolerance in preterm infants.

Objective: This study aims to fill this gap by systematically analyzing the existing evidence, providing valuable insights into the prevalence of feeding intolerance in preterm infants in Africa and Asia

Methods: A comprehensive search strategy was developed to identify relevant studies from electronic databases, including PubMed, Google Scholar, Hinary, Web Science, SCOPUS, Research Gate, and gray literature. The Newcastle-Ottawa Scale (NOS) was utilized to evaluate the methodological quality and potential biases. The data was extracted in a Microsoft Excel spreadsheet (version 2014) and then exported to STATA 17 for further analysis. A meta-analysis was performed to estimate the pooled prevalence of feeding intolerance and explore heterogeneity across studies using a random-effects model. Subgroup analyses, sensitivity analyses, and publication bias assessments were also examined.

Results: This meta-analysis included 17 articles with a total of 4,814 in preterm Infants. The pooled prevalence of feeding intolerance was found to be 26.9% (95%CI; 20.4, 33.3). Moreover, the subgroup analysis revealed that in the continent of Asia, the prevalence of feeding intolerance was found to be 31.1% (95%CI; 21.7, 40.6), while in Africa it was found to be 14.8% (95%CI; 3.9, 25.7). Additionally, when considering study design, the prevalence of feeding intolerance in prospective cohort studies was found to be 18.4% (95%CI; 12.3, 24.6), in cross-sectional studies it was 37.6% (95%CI; 21.6, 53.6), and in retrospective cohort studies it was 30.4% (95%CI; 17.1, 43.8).

Conclusion: The prevalence of feeding intolerance in Preterm Infants in Africa and Asia continent was found to be high. It is alarming that a significant proportion of preterm infant's experience feeding intolerance in these regions. To tackle this problem effectively, it is crucial to implement early screening and monitoring procedures to identify signs and symptoms of feeding intolerance and prevent any further complications. Additionally, conducting systematic reviews that focus on the determinants of feeding intolerance, as well as qualitative studies, would be beneficial in gaining a deeper understanding of this issue in preterm infants

Keywords: *Asia and Africa, Feeding Intolerance, preterm, Systematic review and meta-analysis*