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Impact of Respiratory distress syndrome and perinatal asphyxia on the survival of preterm neonates in in East Africa context: a systematic review and meta-analysis

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Background: Preterm incidence increased rapidly and its disproportionate contribution to increased infant mortality rates in Africa. Hence, the aim of this systematic review and meta-analysis was to determine the pooled mortality rate and associated contributing factors with decreasing the survival of preterm.

Methods: PubMed, Google Scholar, Hinary, Cochrane library, research gate, and institutional repositories were retrieved were used to identify eligible articles through Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) guidelines. Data was extracted in the excel sheet considering mortality rate, and stratified the associated factors with mortality, then the data exported to STATA 14 for further analysis. I² and Egger's test were estimated to the heterogeneity and publication bias of the included article respectively. Subgroup analysis-based country, year, study design, year of publication, and sample size were also examined.

Result: This meta-analysis included 32 articles with total of 21,405 study participants. The pooled mortality rate among preterm in Easter Africa found to be 19.2% (95%CI; 16.0–22.4). Regarding to study design, the mortality rate found to be 18.1%, 19.4%, and 19.7% with respect to prospective cohort, retrospective cohort, and cross-sectional studies. The pooled odds of mortality among preterm with respiratory distress syndrome decreased the survival by nearly three folds [AOR=3.2; 95% CI: 2.2, 4.6] when compared to those who didn't have respiratory distress syndrome. Similarly, preterm presented with birth asphyxia nearly three times higher a risk death as compared with their counterparts [AOR=2.6; 95% CI: 1.9, 3.4].

Conclusion: Mortality of preterm was unacceptably high in Eastern Africa. Fortunately, the main causes of death were found to be respiratory distress syndrome and birth asphyxia which are preventable and treatable hence early detection and timely management of this risk factors are crucial to decrease preterm mortality significantly

Biography

Mr Ermias Sisay Chanie has working in Debre Tabor university in pediatrics and neonatal health Nursing department, Ethiopia. His expertise in evaluation and passion in improving the health and wellbeing. His open and contextual evaluation model based on responsive constructivists creates new pathways for improving healthcare. He has participating in different national and international conference to reduce maternal and child mortality worldwide in general and resource limited setting in particular.

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