Certainty of evidence from Cochrane Reviews on Neonatal Sepsis

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Background: Neonatal sepsis is a modifiable risk factor for healthy growth and development during the neonatal period. More than one-third of the estimated four million neonatal deaths around the world each year are caused by severe infections, and a quarter - around one million deaths - is due to neonatal sepsis/pneumonia alone. Neonatal infections and prematurity are at the moment the most challenging areas of research. Cochrane reviews provide highest level of evidence on neonatal sepsis. Grading the quality of evidence in Cochrane reviews is applied to assess a wide range of interventions and contexts and is important to understand the impact evidence can generate.

Objective: To assess the quality of evidence of Cochrane systematic reviews on neonatal sepsis

Methods: We searched the Cochrane library for systematic reviews related to neonatal sepsis during a two year period (year 2020-2022) using the search terms neonatal sepsis. We reviewed the certainly of evidence in these reviews.

Results: We retrieved five systematic reviews in total. These systematic reviews included 3 to 5 trials each, the number of subjects included in the trials ranged from 482 to 1103 in these reviews. The certainty of evidence was assessed to be of low to moderate quality (1, SR), very low quality of evidence (3, SR), very low to moderate, very low for all main outcomes (1SR). Reasons quoted for low quality of evidence was small trial size (5 SRs), methodological weaknesses (2 SRs), high risk of bias (2 SRs), imprecise results (I SR), low incidence of outcomes, data not available for all outcomes (1 SR). Evidence was downgraded by two to three levels in the five reviews.

Conclusion: Quality of evidence was assesses to be of low to very low quality in the Cochrane reviews on neonatal sepsis in the years 2020-2022. There is a need to initiate better quality trials with adequate sample size (optimal information size). Certainty of evidence emanating from Cochrane reviews is important for guideline development, can affects clinical practice once included in guidelines. Good quality evidence can directly impact clinical practice and improve treatment options for neonates in developing countries.