

A Model of Neurodevelopmental Risk and Protection for Preterm Infants

Resume

Neurobehavioral disabilities such as cerebral palsy and neurosensory impairment occur in approximately 5 to 15% of preterm infants [1]. About 50 to 70% of preterm infants weighing less than 1500g develop dysfunction at a later stage. These include cognitive, social and behavioral disorders that can continue till adulthood, making preterm birth a major public health concern [2].

Therefore, the risk of neurobehavioral disorders is high in preterm infants. One of the reasons for the elevated risk is the alteration in the structural differentiation of the central nervous system which occurs between 23 and 32 gestational weeks [3]. Other causes that might affect neurobehavioral disorders include environmental factors such as NICU environment and care giving experience [4].

Therefore, the introduction of a neurodevelopmental risk and protection model might help in identifying and solving the issues that contribute to the development of neurobehavioral dysfunctions. The model focuses on neuroprotection during the neonatal period to positively influence long term developmental outcomes for preterm infants. Understanding the association between NICU interventions and long term outcomes is essential to guide care giving practices in the NICU [1].

References

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