Mohammed Alrowaily, Pediatr Ther 2018, Volume 8
DOI: 10.4172/2161-0665-C3-057

Gray Zone of infant viability from central Saudi Arabia

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Background: Survival of preterm neonates has steadily improved over the past five decades, possibly due to changes in the neonatal intensive care. However, in Saudi Arabia, there are no written guidelines on the definition of the lower limit of viability, and there has been a call for such limit. Thus, the aims of this study were: (1) to determine lower limits of viability and survival outcome in extremely-low birth weight (ELBW) infants, and (2) to determine incidence of neurodevelopmental and cognitive abnormalities within 3-6 years after birth.

Methods: Retrospective review of the charts of all live inborn ELBW infants admitted to the neonatal unit of King Abdulaziz Medical City, Riyadh, Saudi Arabia, within 3 years [between January 1st, 2005 and December 31st, 2007] was conducted (n=117). Data were collected on demographic and birth data, neonatal complications & interventions and death on discharge. Follow up of all survivors was done to assess the outcome within 3-6 years after birth, for neurodevelopmental and cognitive abnormalities. Predictors of survival were determined using logistic regression model. Receiver operating characteristic curve (ROC) was applied to determine the lower limits of viability of ELBW. Significance was considered at p-value ≤0.05.

Results: Of all ELBW infants, 59% survived, and 41% died before discharge. Survival rate was directly correlated with GA and birthweight ($p<0.05$). The 50% limits of viability were those at 25 weeks' gestation or with >600 g. Applying the ROC curve, the optimum limits for viability were 26 weeks' gestation and 700 g birth weight. After adjusting for possible confounders, significant predictors of survival were birthweight ($p=0.001$) and Apgar score ($p<0.001$). The following impairments during follow up of survivors: developmental delay (39.2), cerebral palsy (36.2%), speech problems (33.3%), wasting (12.5%), mental retardation (10%), visual problems (6.6%) and hyperactivity (5.6%).

Conclusion: Birthweight could be considered as more valid than GA in prediction of viability of ELBW infants. The process of care of ELBW infants needs to be revisited taking these findings into consideration. Routine aggressive resuscitation of newborns at 23 weeks and/or with <600 g. birth weight should be approached with caution A multicenter study is recommended.

Biography

Mohammed Alrowaily is an Paediatrician from King Abdulaziz Medical City. He undertook the present study with indigenous Maori health provider Ngati Awa and Eastern Bay Primary Health Alliance to establish if and how BlisK12 probiotic decreases pharyngeal GAS carriage and sore throats, to increase the efficacy of school programmes particularly for the one third of children getting ARF, who do not recollect a preceeding GAS sore throat.

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