

Risk factors associated with outcomes of very low birthweight infants in four Asian countries.

WMV Wariki, R Mori, NY Boo, IGS Cheah, M Fujimura, J Lee, Wong KY

Journal of Paediatrics and Child health 2013. 49(1): E23-E27

Abstract

AIM:

The study aims to determine the risk factors associated with mortality and necrotising enterocolitis (NEC) among very low birthweight infants in 95 neonatal intensive care units in the Asian Network on Maternal and Newborn Health.

METHODS:

This is a cross-sectional study using an international collaborative database of 17,595 very low birthweight infants admitted within 28 days of birth between 2003 and 2006 in four Asian countries. Information on the mortality and morbidity of neonates admitted to the neonatal intensive care units was recorded. Factors associated with the death and diseases of infants were estimated using multilevel multivariate logistic regression. Random effects were included to account for the clustering of the observations.

RESULTS:

Overall discharge mortality was 15% and it was significantly different by countries and units. The mortality rate was found to be significantly higher in neonates with pulmonary haemorrhage (odds ratio 1.83, 95% confidence interval 1.63-2.04) and air leak syndrome (odds ratio 1.51, 95% confidence interval 1.30-1.72). The incidence of NEC was 4.3% and was strongly associated with other morbidities. Multivariate logistic regression showed that patent ductus arteriosus was the most significant risk factor associated with NEC.

CONCLUSIONS:

Our analysis has highlighted the great potential that multi-country, collaborative datasets have in terms of epidemiologic research when it comes to identifying issues in perinatal health that are common throughout Asia, and in relation to particular issues pertaining to specific countries and neonatal units. Establishing collaborative networks, conducting analyses of common datasets and further epidemiologic research are now essential measures to improve newborn health in Asia.