

M16.4 Reduction of Perinatal Morbidity and Mortality**14:30 Theatre 2****Improved Mortality, Morbidity and Early Neurodevelopmental Outcomes of Extreme-low-birth Weight Infants**

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We studied the mortality, morbidity and early neurodevelopmental outcomes of the cohort of infants born with birth weight less than 1,000 grams born at Queen Mary Hospital from year 2008 to 2015. Perinatal and outcome data were collected from Vermont Oxford Network Database. Outcomes of neurodevelopmental assessment performed at Duchess of Kent Children's Hospital were retrieved from the Clinical Management System. A total of 217 infants were born during the eight-year study period, 176 survived and among them 143 infants underwent neurodevelopmental assessment at corrected age of 18-22 months. 40 (28.0%) of them has neurodevelopmental impairment, which was defined as either one of the followings: (1) cerebral palsy; (2) profound visual impairment; (3) profound hearing impairment; (4) Griffiths scale scores <2 SD overall or in any of the subsets. We compared these data with the published data from our earlier cohort of ELBW infants born from year 1993 to 2002. Overall survival rate has improved significantly from 71.4% to 81.1% ($p=0.02$) over these two periods with greatest improvement seen in infants with birth weight 500-750 grams. More infants received antenatal steroid in our current cohort and fewer infants were born with first Apgar score <3 . There were significantly fewer infants with severe complications of intraventricular haemorrhage (grade 3 or 4) and necrotising enterocolitis. Duration of mechanical ventilation was also shorter and length of hospital stay dropped from average of 110 days to 82 days. More encouragingly, cerebral palsy rate has dropped significantly from 13.4% to 4.2% ($p=0.01$), visual impairment rate from 10.3% to 2.1% ($p=0.01$), rate of having overall Griffiths development score <2 SD from 16.7% to 7.7% ($P=0.04$). Our study has shown that over last 20 years with advancement of perinatal and neonatal intensive care support, both the survival and quality of survival of these ELBW infants has improved significantly.