controls. This association seems to vary according to the method of ART and type of CHD and may be due to ART per se and/or the underlying infertility of couples.

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RANDOMIZED TRIAL OF HIGH-FREQUENCY OSCILLATORY VENTILATION VERSUS CONVENTIONAL VENTILATION: A 3 YEAR FOLLOW-UP

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Background: The long term outcome of children enrolled into neonatal trials designed to compare the effects of high frequency oscillatory ventilation (HFOV) versus conventional ventilation (CV) has been rarely studied.

Objective: To assess respiratory, growth and neurodevelopmental outcomes at 3 years of age in infants born at GA ≤ 30 weeks enrolled in a randomized controlled trial designed to compare the short term respiratory outcomes of HFOV versus CV.

Methods: Surviving infants (35/40) were followed until 3 years of age and evaluated for health history, growth and neurodevelopmental outcome.

Results: All the survivors of the original cohort were assessed in the follow-up at a mean age of 36.9 ± 3.6 months. Between HFOV (n:19) and CV (n:16) group there were no differences in the frequency of hospital readmissions, pulmonary illness and growth; no statistically significant differences were detected in major cranial ultrasound abnormalities (31.6 vs 37.5%), cerebral palsy (15.8 vs 12.5 %), major neurosensory impairment (10.5 vs 6.3%), IQ scores (94.8 ± 18.8 vs 96.4 ± 12.8) and behavioural abnormalities (26.3 vs 31.2%).

Conclusions: In our cohort the early use of HFOV compared to CV has no impact on respiratory, growth and neurodevelopmental morbidity at 3 years of age.

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QUALITY OF EARLY MATERNAL INTERACTION PREDICTS COGNITIVE DEVELOPMENT AT 2 YEARS IN INFANTS BORN VERY PRETERM.

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Aims: To test the hypothesis that quality of early maternal interaction impacts on later neurobehavioural development in infants born very preterm.

Methods: Participants were 199 infants born before 32 weeks gestation who had participated in a video-taped, standardised assessment of mother infant interaction at 3 months corrected age. (Nursing Child Assessment Teaching Scale -NCATS). Mothers also completed the Parenting Stress Index self-report. Infants' cognitive (MDI) and motor (PDI) performance was assessed at 2 years corrected age using the Bayley Scales of Infant Development-II. Follow-up data were available for 96% of infants (n=191).

Results: Mean MDI score was 92.03 (SD 19.03) with 34% classified as delayed (score < -1 SD). Stepwise regression analysis with MDI scores as the dependent variable found that higher age-standardised scores for cognitive development were associated with fewer days ventilated in the neonatal unit ($p < 0.001$), female gender ($p = 0.001$), more sensitive, growth fostering and responsive maternal behaviours as measured by NCATS ($p = 0.003$), lower scores for self-rated, parent-child dysfunctional interaction ($p = 0.001$) and higher level of maternal education ($p = 0.047$). These variables accounted for over a third of the variance in MDI scores (adjusted $r^2 = 0.36$). Gestational age, number of previous children, birthweight, maternal age, twin birth and material deprivation made no contribution. Repeating the analysis with PDI scores found that motor development was predicted by infant responsiveness to interaction but not by caregiver's NCATS score.

Conclusions: This prospective study found both objective and self-rated quality of maternal interaction predicted later neurobehavioural development suggesting a potentially important target for intervention.