Zusammenfassung der Master-Thesis von

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Improved Outcome for Very Low Birth Weight Multiple Births

Objective: To describe time trends in neurodevelopmental outcome for very low birth weight (VLBW) multiple births in relation to VLBW singletons.

Methods: We compared neurodevelopmental outcome of two VLBW (<1250 g) cohorts recruited between 1983-85 (cohort 1, n=115) and 1992-94 (cohort 2, n =144). The Bayley Scales of Infant Development (Mental Developmental Index (MDI) and Psychomotor Developmental Index (PDI)) and a standardized neurological examination were administered at 2 years corrected age.

Results: For singletons, mean MD and PDI as well as the proportion of developmental delay (<84) did not change between cohort 1 and 2 and was within normal range. The prevalence of cerebral palsy remained unchanged at 2 percent for severe cerebral palsy and at 14 percent for mild and moderate cerebral palsy. For multiple births, mean MDI increased (mean (SD) 79.4 (11.7) to 96.9 (18.6), p=0.01) and the prevalence of CP decreased (OR (95% CI) 0.6 (0.3-1.2), p=0.16). After adjustment for risk factors such as intraventricular hemorrhage, bronchopulmonary dysplasia, gestational age and socioeconomic status, mean MDI remained significantly higher for multiple births in cohort 2 than for those in cohort 1 (ANCOVA p=0.008). The proportion of disease free survival increased from cohort 1 to cohort 2 (6% to 37%, p=0.002) for multiple births, but not for singletons. In cohort 2, multiple births had a similar neurodevelopmental outcome than singletons.

Conclusion: The cognitive outcome of VLBW multiple births has improved and may be due to changes in perinatal practice. However, the outcome was similar to that of VLBW singletons who were unaffected by changes in neonatal care with a high proportion of motor delay and cerebral palsy.