

Objective To determine changes in incidence of CP and motor disorders in preterm children since 2004, and to identify associated factors.

Methods We included all infants born < 32 weeks, admitted to our tertiary NICU, born in 2004–2005 (period-I) and in 2008–2009 (period-II). We excluded children transferred from other tertiary NICUs, with major malformations, and neuromuscular disorders. We compared the incidence of CP and other motor disorders at the age of 2 years. To identify potential risk factors, we used the Nursery Neurobiologic Risk Score (NBRS), including pH, ventilation, infection, convulsions, intraventricular hemorrhage, periventricular leukomalacia, and hypoglycemia.

Results 558 children were included; 269 period-I and 289 period-II. The incidence in CP was not significantly different: 5.6% vs 6.6%, respectively. The number of children with other motor disorders was significantly higher in period-I than in period-II: 15 vs 5 (5.6% vs 1.7%, $p < 0.05$). NBRS-scores were median 2.5 vs 2.0 ($p = 0.12$). In period-I, pH and infection contributed more to a higher NBRS, whereas mild periventricular leukomalacia did in period-II (all $p < 0.05$). Total and subscores of the NBRS were strongly related to CP ($p < 0.01$), apart from hypoglycemia in both periods, and ventilation and suspected infections in period-I.

Conclusions Since 2004, the incidence of CP in preterm children did not change, but rates of other motor disorders decreased, without considerable changes in associated risk factors.

1239 NEURODEVELOPMENTAL OUTCOME ONE YEAR AFTER EARLY VERSUS LATE SELECTIVE SURFACTANT TREATMENT

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Aim To investigate whether neurodevelopmental outcome at age one year might be different after early versus late rescue surfactant treatment in preterm infants.

Methods In 54 preterm infants, having gestational age between 25–30 weeks who were enrolled in a controlled trial of early versus late selective surfactant treatment (45 vs. 70 min respectively), a standardized follow up of medical history, neurodevelopmental outcome using the Bayley Scales of Infant and Toddler Development, Second Edition at 9–12 months corrected age.scales were carried out.

Results Median Mental developmental index (MDI) score was 107 for early group and 111 for late group. Median Psychomotor developmental index (PDI) score was 82 for early group and 93 for late group. Although median MDI and PDI scores were slightly higher in late poractant treatment group and neurodevelopmental impairment was higher in early rescue group than the late rescue group, this was not statistically significant.

Conclusion Our results demonstrated that both early and late poractant treatment had similiar effects on the neurodevelopmental outcomes of preterm infants with RDS. In terms of neurodevelopmental outcomes there is no obvious advantage of an immediate surfactant administration in preterm infants according to our results.

1240 MOTHERS' AND HEALTH PROFESSIONALS' PERSPECTIVES OF BARRIERS AND FACILITATORS TO ATTENDANCE AT CANADIAN NEONATAL FOLLOW-UP PROGRAMS

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Background and Aims Neonatal Follow-Up (NFU) programs are increasingly challenged to support attendance, address family needs, and provide essential services. Up to 30% of families do not attend these programs. The aim of this research was to investigate barriers and facilitators of NFU attendance from the perspectives of health care professionals (HCPs) and mothers.

Methods A qualitative research approach using purposive maximum variation sampling was conducted. HCPs participated in focus groups; mothers in individual interviews. Descriptive analysis was conducted to determine themes. Data from HCPs and mothers were analyzed separately and then compared.

Results Participants were 20 HCPs from 9 NFU programs and 6 mothers from 2 NFU programs located in the most populous regions of central and western Canada. Both HCPs and mothers identified limited family resources and restrictive clinic operations as barriers. HCPs identified fear of bad news as a barrier; mothers viewed bad news as a facilitator; the need to address the issue and move forward. Both HCPs and mothers viewed vulnerability as a barrier; however, the meaning differed. HCPs reported creating vulnerability for the family by monitoring their child's development over time; whereas, mothers reported the need to protect their vulnerable child from risks (i.e., infection, weather). For mothers, the vulnerable child in combination with limited family resources was a key barrier to attendance.

Conclusions A better understanding of these perspectives may facilitate modifications to NFU programs to increase attendance, and ultimately improve outcomes for children at high risk for developmental delays and their families.

1241 ADAPTATION PROBLEMS IN VERY LOW BIRTH WEIGHT CHILDREN AT 10 YEARS OF AGE

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Background Adaptive behaviour is the behaviour necessary for an individual to function safely and appropriately in daily life, both at a personal and social level. The Vineland Adaptive Behavior Scales (VABS) has been used to describe an individual's adaptive behaviour as reported by caregivers.

Objective To compare skills of communication, daily living and socialisation as well as the total behaviour score in very low birth weight (VLBW) children with a control group at ten years of age.

Design/methods In this follow-up study, 39 children with birth weight below 1500 grams, including 10 children with cerebral palsy (CP), and 31 term born control children were evaluated by VABS at ten years of age. The informants were parents, mostly mothers. In VABS, adaptive behaviour is expressed as total adaptive behavior composite score based on the three subscales: Communication, daily living skills and socialisation.

Results The mean total adaptive behaviour composite score in the VLBW group was 85.7 (SD 16.8) compared with 105.5 (SD 17.5) in the control group ($p < 0.001$). All three subscales; communication, daily living skills and socialisation were significantly lower in the VLBW group than in the control group. Excluding children with CP, the total adaptive behavior composite score was 90.6 (SD 14.5) in the VLBW, still significantly lower than in the control group ($p = 0.001$).