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NEURODEVELOPMENTAL OUTCOME OF EXTREMELY PRETERM INFANTS AT 2.5 YEARS OF AGE; EXTREMELY PRETERM INFANTS STUDY IN SWEDEN (EXPRESS)

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Background: Active perinatal increases the survival of extremely preterm infants but there are concerns that improved survival might increase the rate of disabled survivors.

Objective: To determine neurodevelopmental outcome at 30 months corrected age (CA) of extremely preterm children (EPT, < 27 weeks) in a Swedish National cohort.

Design/Methods: Population-based prospective study of all EPT children born in Sweden from April1, 2004, to March 31, 2007. 707 infants were born alive. 497 (70%) survived to one year. In survivors, neurosensory impairment (NSI) was assessed by a standardized pediatric and ophthalmological examination. Development was evaluated with the use of Bayley-III. Results were compared with a matched control group of children born at term. Bayley scores were related to the distribution of the control population.

Results. At a median age of 30 months CA, 414 of 460 eligible children (90%) were formally assessed. The rates of cerebral palsy, moderate and severe visual impairments and severe hearing loss were 7.0%, 3.0%, 0.8% and 0.8%, respectively vs 0.0%, 0.0%, 0.3%, 0.0%, respectively among controls. Cognition < -2SD but >-3SD, and < -3SD was 5.0% and 6.2%, respectively vs 0.3% and 0,3%, respectively among controls. 40 children were assed by chart review. In 454 children either formally assessed or by chart review (97% of eligible children), the rates of light to moderate and severe disabilities were 15% and 15%, respectively compared with 3.2% and 1.1%, respectively among controls .

Conclusion: NSI and disability rates are favourable compared with earlier studies despite marked increase in survival