

Background:

Children born small for gestational age (SGA) between gestational week 28 and term constitute the largest group in the Swedish neonatal long-term follow-up programme, which extends to 5.5 years of age. This heterogeneous group has a higher prevalence of learning difficulties compared with children born appropriate for gestational age. Findings regarding motor function, however, remain inconsistent.

Objectives:

The main objective was to study motor function in children born small for gestational age (SGA) using results from the Movement Assessment Battery for Children–2 (MABC-2) registered in the Swedish Neonatal Quality Registry (SNQ) for children born at Skåne University Hospital.

Secondary objectives, within this SGA cohort, were to examine motor function in children who required supplemental oxygen until gestational week 36, and to explore associations between MABC-2 outcomes, gestational age at birth, and psychological factors such as concentration, endurance, and intelligence quotient (IQ).

Methods:

This cross-sectional registry-based study used data from SNQ. Children born 2014–2018 who met the criteria for SGA were identified ($n = 123$). Complete motor assessment data from the 5.5-year follow-up were available for 57 children and were analyzed. The IQ -score was obtained from the Wechsler Preschool and Primary Scale of Intelligence and the psychology structured assessment regarding endurance and ability to concentrate was used.

Results:

The mean MABC-2 scale scores were 8.9 (SD 3.0) for manual dexterity, 9.7 (SD 2.9) for ball skills, 10.2 (SD 3.2) for balance and 9.3 (SD 3.0) for the total test score, relative to age-normed reference values (mean = 10). Children who required prolonged supplemental oxygen until gestational week 36 demonstrated significantly lower manual dexterity than the remaining SGA group (mean 6.5 vs 9.2; $p = 0.036$). No association was found between motor function and gestational age at birth. A weak but statistically significant association was found between manual dexterity and the ability to concentrate ($r = -0.275$, $p = 0.039$).

Conclusion

Children born SGA generally demonstrated motor performance within the lower range of normal variation at 5.5 years of age. Manual dexterity appeared particularly vulnerable among children with prolonged oxygen requirement, whereas no strong associations were found for other motor domains. Further studies using larger datasets from SNQ are warranted to confirm these findings. These findings suggest a need to reconsider whether, and how, motor assessment at 5.5 years of age is required for children who demonstrated normal development at the 2-year follow-up.