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Article Title: Early term, preterm and post-term gestation births increase the risk of special educational needs during schooling

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The median birth weight was 3400 g. 17,784 children had section and 10,404 (2.8%) had an Apgar score less than eight. 18,527 (5%) of sampled school children were born preterm. Follow-up period: 19 years of age attending mainstream schools, special schools and school classes and units within mainstream schools in Scotland. Children who could not be linked to their obstetric data were excluded. Setting: School children resident in 19 Local Authority areas in Scotland; recruited from 2005 school census data. Prognostic factors: Obstetric complications and course; individual school census record was linked to mother’s data from the Scottish Morbidity Record that collects information on all women discharged from Scottish maternity hospitals including maternal and infant characteristics, clinical management and obstetric complications. Outcomes: Incidence of SEN collated from information in the school census.

METHODS

Design: Retrospective cohort study. Follow-up period: Birth to 19 years old.

MAIN RESULTS

18,527 (5%) of sampled school children were born preterm (<37 weeks gestation), 58,611 (16.2%) were born by caesarean section and 10,404 (2.8%) had an Apgar score less than eight. The median birth weight was 3400 g. 17,784 children had a record of SEN. Low birth weight (<2500 g) was associated with an increased risk of subsequent SEN (unadjusted OR 2.22, 95% CI 2.10 to 2.33, p<0.001). Extreme preterm delivery (24–27 weeks) was associated with increased risk of subsequent SEN (adjusted OR 6.92, 95% CI 5.58 to 8.58, p=0.001); the risk declined as births approached a gestational age of 40–41 weeks. Compared with infants born at 40 weeks, early term babies (born between 37 and 39 weeks of gestation) had an increased risk of SEN (adjusted OR 1.16, 95% CI 1.12 to 1.20, p<0.001). Infants born at 39 weeks of gestation were also at increased risk of SEN (adjusted OR of 1.09, 95% CI 1.04 to 1.14, p<0.001). The risk of developing subsequent SEN was also increased in children born at 42 weeks of gestation (42 weeks; adjusted OR 1.16, 95% CI 1.08 to 1.25, p<0.001), although the risk was not significantly increased in those born at 45 weeks (adjusted OR 1.35, 95% CI 0.87 to 2.09, p=0.180). There was no difference between the likelihood of subsequent SEN in children who had been born by elective versus spontaneous delivery.

CONCLUSIONS

Preterm, early term and post-term births were all associated with an increased risk of the infant having SENs during their schooling. The relationship with regard to the severity of special needs was not assessed.

NOTES

Some subgroup analyses (eg, those born at 43 weeks of gestation) may have been underpowered to detect significant differences between the groups. It is unclear whether the analyses adjusted for multiple comparisons.

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Early term, preterm and post-term gestation births increase the risk of special educational needs during schooling

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