Gestational Age at Term, Delivery Circumstance, and Their Association with Childhood Attention Deficit Hyperactivity Disorder Symptoms.

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Abstract

BACKGROUND:
Perinatal characteristics may identify subgroups of term-born children at risk for academic and behavioural difficulties. Using follow-up data from the Pregnancy Outcomes and Community Health Study, we subdivided term births according to two potential markers of perinatal risk (gestational age, delivery circumstance) and evaluated their association with attention deficit hyperactivity disorder (ADHD) symptoms.

METHODS:
We included children born at term whose mothers completed the Conners' Parent Rating Scales-Revised-Short Form (CPRS-R-S) (n = 610; ages: 3-9 years). The CPRS-R-S yields age and sex-referenced T-scores for the two primary dimensions of ADHD (inattention, hyperactivity) and an ADHD Index that reflects both dimensions. Using general linear models, we evaluated whether: (1) term delivery defined by gestational week (reference: 39-40 weeks), or (2) term delivery circumstance defined by labour onset type and mode of delivery (reference: spontaneous labour, vaginal delivery) was associated with these problems.

RESULTS:
Following adjustment for parity, sociodemographics, and maternal mental health both during pregnancy and at the child follow-up survey, the induced labour plus caesarean group exhibited higher inattention and ADHD Index scores relative to the spontaneous labour, vaginal delivery group (inattention: mean difference = 5.1, 95% CI 0.6, 9.7; ADHD Index: mean difference = 4.1, 95% CI 0.5, 7.8). Findings were primarily driven by male children.

CONCLUSIONS:
Among term-born children, only those whose mothers experienced induction of labour that culminated in caesarean delivery exhibited higher levels of ADHD symptoms. Prenatal, antepartum, and/or postnatal factors associated with this delivery profile may reflect increased risk for such problems.