Antecedents of Screening Positive for Attention Deficit Hyperactivity Disorder in Ten-Year-Old Children Born Extremely Preterm.


Abstract

BACKGROUND:
The incidence of attention deficit hyperactivity disorder is higher among children born very preterm than among children who are mature at birth.

METHODS:
We studied 583 ten-year-old children who were born before 28 weeks of gestation whose IQ was above 84 and had a parent-completed Child Symptom Inventory-4, which allowed classification of the child as having or not having symptoms of attention deficit hyperactivity disorder. For 422 children, we also had a teacher report, and for 583 children, we also had a parent report of whether or not a physician made an attention deficit hyperactivity disorder diagnosis.

RESULTS:
The risk profile of screening positive for attention deficit hyperactivity disorder based on a parent's report differed from the risk profile based on the teacher's report, whereas the risk profile according to a physician and according to any two observers closely resembled the parent-reported profile. Among the statistically significant risk factors were young maternal age (parent, physician, and two observers), maternal obesity (parent, physician, and two observers), maternal smoking (parent, physician, and two observers), magnesium given at delivery for seizure prophylaxis (parent and two observers), recovery of Mycoplasma sp. from the placenta (teacher and two observers), low gestational age (parent and two observers), low birth weight (teacher and physician), singleton (parent, physician, and two observers), male (parent, teacher, physician, and two observers), mechanical ventilation on postnatal day seven (physician), receipt of a sedative (parent and two observers), retinopathy of prematurity (parent), necrotizing enterocolitis (physician), antibiotic receipt (physician and two observers), and ventriculomegaly on brain scan (parent and two observers).

CONCLUSIONS:
The multiplicity of risk factors identified can be subsumed as components of four broad themes: low socioeconomic state, immaturity or vulnerability, inflammation, and epigenetic phenomena.