Cord blood metabolites linked with an ADHD diagnosis in childhood

By Dr. Jessica Edwards

Researchers in the USA have analysed whether the levels of branched-chain amino acids (BCAAs) detectable in maternal plasma and newborn cord blood are associated with the development of attention-deficit hyperactivity disorder (ADHD) later in childhood. Neha Anand and colleagues used data from 626 children involved in the Boston Birth Cohort, which was recruited from a largely urban, low-income, US minority population. Of these participants, 299 had clinically diagnosed ADHD and 327 were neurotypical. The researchers collected maternal and cord blood samples soon after birth, measured BCAAs by liquid chromatography-tandem mass spectrometry, and compared the data between the two groups. They found an association between higher BCAA levels in cord blood (but not in maternal blood) and an increased risk of developing ADHD in childhood. The researchers explained that pending validation, these findings might provide insights into mechanisms that contribute to ADHD development. The findings could also suggest that cord metabolites might be useful early predictive biomarkers for ADHD.

Referring to:

Anand, N. S. et al. (2020), Maternal and cord plasma branched-chain amino acids and child risk of attention-deficit hyperactivity disorder: a prospective birth cohort study. J. Child Psychol. Psychiatr. doi: 10.1111/jcpp.13332.