Prognostic model identifies cerebral palsy in infants

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A prognostic model using 12 clinical variables improves prediction of

cerebral palsy (CP) compared with clinical presentation with encephalopathy, according to a study published online Jan. 17 in *JAMA Pediatrics*.

Amira Rouabhi, from McGill University in Montreal, and colleagues conducted a case-control study using data from the Canadian Cerebral Palsy Registry for children with CP and the Alberta Pregnancy Outcomes and Nutrition study for controls to develop a CP prognostic tool that can be applied to all term neonates. A total of 3,250 infants were included.

The researchers found that encephalopathy was present in 28 percent of 1,184 infants with CP and 0 controls. The final prediction model included 12 variables and was able to classify 75 percent of infants correctly, with sensitivity and specificity of 56 and 82 percent, respectively, and a C-statistic of 0.74. Risk factors were additive.

At a proposed threshold for screening of a probability greater than 0.3, sensitivity and specificity were 65 and 71 percent, respectively. Overall, 2.4-fold more children with CP were identified with the prognostic tool than would have presented with encephalopathy (odds ratio, 13.8).

"This tool may be used at a population level for the early detection of CP and may allow for infants with uneventful pregnancies or deliveries to be identified for early interventions," the authors write.

More information: Amira Rouabhi et al, Development of a Bedside Tool to Predict the Diagnosis of Cerebral Palsy in Term-Born Neonates, *JAMA Pediatrics* (2023). DOI: 10.1001/jamapediatrics.2022.5177

Toohey Monica et al, New Screening Tool for Term-Born Infants Enables Update to the Clinical Practice Guideline for Early Diagnosis of Cerebral Palsy, *JAMA Pediatrics* (2023). DOI:

[10.1001/jamapediatrics.2022.5189](#)

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