



## Motor Outcomes After Neonatal Arterial Ischemic Stroke Related to Early MRI Data in a Prospective Study

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Titre Motor Outcomes After Neonatal Arterial Ischemic Stroke Related to Early MRI Data in a Prospective Study

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Résumé en anglais  
OBJECTIVE: We aimed to correlate early imaging data with motor outcomes in a large, homogeneous, cohort of infants with neonatal (diagnosed before 29 days of life) arterial ischemic stroke (AIS).METHODS: From a prospective cohort of 100 children with neonatal AIS, we analyzed the MRI studies performed within the 28 first days of life for 80 infants evaluated at 2 years of age. The relationships between infarction location and corticospinal tract (CST) involvement and motor outcomes were studied RESULTS: Seventy-three infarctions involved the middle cerebral artery (MCA) territory. Of those, 50 were superficial infarctions, 5 deep infarctions, and 18 mixed infarctions. The CST was involved in 24 cases. Nineteen patients with MCA infarctions (26% [95% confidence interval: 16%-34%]) developed hemiplegia. Mixed infarctions ( $P < .0001$ ) and CST involvement ( $P < .0001$ ) were highly predictive of hemiplegia. In contrast, 88% of children with isolated superficial MCA infarctions did not exhibit impairment. CONCLUSIONS: Accurate prediction of motor outcomes can be obtained from early MRI scans after neonatal AIS. The absence of involvement of the CST resulted in normal motor development in 94% of cases. CST involvement resulted in congenital hemiplegia in 66% of cases.

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