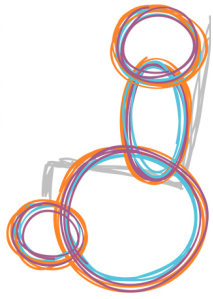# Towards a better understanding of the detection, causes, and management of stroke in newborns and children

childhood
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Summary

Paediatric stroke is often recognized and diagnosed much later after it occurs. This is due in part to its frequently non-obvious symptoms but also to a lack of awareness about pediatric stroke among clinicians. Increased educational efforts to heighten awareness among clinicians about the types of stroke common to newborns and children will enhance the recognition of stroke and target more patients for appropriate treatment. This article synthesized other studies and reviews that have contributed to the general knowledge about arterial ischemic stroke (AIS), cerebral sinovennous thrombosis (CSVT), and hemorrhagic stroke (HS) during the neonatal and childhood timeframes.

What families should know

Stroke is somewhat common among newborns, but it is quite rare in children. Therefore clinicians do not often suspect stroke as an underlying diagnosis. Pediatric stroke is only rarely fatal but about half of those who do survive develop a long-term neurological deficit. Such deficits include impaired motor function, language, and cognitive skills as well as epilepsy. Current advances in neuroimaging are making it easier to recognize stroke so that newborns and children can be targeted for appropriate supportive and neuroprotective treatment to minimize longterm damage.

What practitioners should know

Stroke is best understood when classified by its mechanism of action and the age group it affects. Arterial ischemic stroke (AIS) and cerebral sinovenous thrombosis (CSVT) involve an obstruction of blood flow to the brain and are common forms of pediatric stroke along with hemorrhagic stroke (HS). However, these three types of stroke have different rates of prevalence, causes, and long-term effects in newborns than they do in children. Neuroimaging and laboratory testing are essential to detecting and understanding pediatric stroke so that appropriate treatment can be pursued. While other imaging techniques should supplement magnetic resonance imaging (MRI) as appropriate, this is the preferable choice

of imaging tools, since it gives the most accurate information without exposing the infant or child to radiation. MRI can also be useful in predicting long-term neurological deficits in stroke patients.

Reference

Cárdenas, J., Rho, J., & Kirton, A. (2011). Pediatric Stroke. Child's Nervous System, 27(9), 1375-1390.

Link to article : https://www.ncbi.nlm.nih.gov/pubmed/21336993