

Synoptic Note on Diagnosis and Treatment of Stroke in Children

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DESCRIPTION

Strokes are more commonly seen in adults however conjointly occur within the pediatric population. Almost like adult strokes, pediatric strokes are thought of as medical emergencies and need prompt diagnosis and treatment to maximize favorable outcomes. Unfortunately, the diagnosis of stroke in children is usually delayed, commonly because of parental delay or failure to contemplate stroke within the medical diagnosis. Children, particularly young children, usually present differently than adults. A lot of the treatment for pediatric strokes has been adapted from adult guidelines however the best treatment has not been clearly defined. Although commonly thought of as an adult disease, strokes conjointly occur within the pediatric population and lead to important morbidity and mortality [1]. The result lasts for many years and causes a significant burden on the patient and family.

Pediatric strokes will be divided into anemia strokes, which embody blood Arterial Ischemic Strokes (AIS) and Cerebral Sinus Venous Thrombosis (CSVT), and haemorrhagic strokes. Strokes may also be divided into perinatal strokes, which occur between twenty weeks of fetal life and the twenty-eighth postnatal day, and childhood strokes, which occur between twenty-nine days and eighteen years of maturity. Perinatal strokes aren't rare and are considerably a lot of common than strokes in older children. The majority of perinatal strokes are AIS though CSVT and haemorrhagic strokes will occur. Agrawal, et al. identified a prevalence of perinatal AIS of twenty-nine per 10,000 live births [2]. This increased to thirty-seven per 10,000 live births when perinatal haemorrhagic strokes were enclosed.

Fullerton, et al. identified an incidence of first-time childhood stroke of 2.5 per 10,000 youngsters (1.2 with AIS and 1.1 with hemorrhagic stroke) [3]. When further divided into age subgroups, infants (>30 days but <1 year of age) had the highest annual stroke rates including AIS and hemorrhagic strokes. In addition, stroke is usually misdiagnosed or not at the start thought-about within the medical diagnosis. Rafay, et al. found that hemorrhagic stroke was suspected by the initial physician in exactly 35% of patients who were ultimately diagnosed with AIS [4]. Strokes in children, as in adults, are a medical emergency and will be treated rapidly to maximize favorable outcomes.

There's a paucity of data relating to morbidity and mortality as a result of delays in treating strokes in children.

However, the adult literature has shown that earlier clot thrombolytic treatment for AIS is related to decreased in-hospital mortality as well as decreased incapacity. In an effort to improve the treatment of pediatric strokes, pediatric centers have emulated adult stroke centers and have developed acute stroke protocols. In one study, the event of a stroke alert protocol decreased the median time to diagnosis by half for children who presented to the emergency department with acute neurologic deficits [5].

Patients present differently betting on their age and also the variety of strokes. Children with AIS usually present with focal weakness like adults. However, children < six years, and particularly younger than one year of age, are probably to present with altered mental status and seizures. Patients with CSVT can present with signs and symptoms. Seizures and decreased level of consciousness are typical presentations in all ages. Neonates, who comprise a large share of patients, usually present with edgy movements, irritability, and hypotonia. Non-neonates usually present with headache or focal neurologic signs like hemiparesis, visual disorder, ataxia, speech impairment, or nervus palsies. Children with hemorrhagic stroke usually present the same as adults with over half presenting with headache or vomiting. A big variety also presents with seizures and altered mental status furthermore as focal neurologic deficits like hemiparesis or aphasia.

Strokes occur within the pediatric population and actually occur most typically in the perinatal period. Though several pediatric stroke patients can present equally to adults, the emergency physician should consider the possibility of stroke in pediatric patients who present with seizures or altered mental status, particularly in younger patients. Strokes in children are a medical emergency and require rapid diagnosis and treatment. The utilization of a stroke alert protocol has been shown to decrease the time to diagnosis. Recanalization therapies, like tPA and endovascular thrombectomy, are controversial in pediatrics however have shown benefits in small case series. If potential, consultation with pediatric subspecialists older in treating strokes can be invaluable in guiding management.

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REFERENCES

1. Lehman LL, Beate J, Kapur K. Workup for perinatal stroke does not predict recurrence. *Stroke*. 2017;48: 2078-2083.
2. Agrawal N, Johnston SC, Wu YW. Imaging data reveal a higher pediatric stroke incidence than prior US estimates. *Stroke*. 2009;40(11): 3415-3421.
3. Fullerton HJ, Wu YW, Zhao S. Risk of stroke in children: Ethnic and gender disparities. *Neurology*. 2003;61: 189-194.
4. Rafay MF, Pontigon AM, Chiang J. Delay to diagnosis in acute pediatric arterial ischemic stroke. *Stroke*. 2009;40: 58-64.
5. Mallick AA, Ganesan V, Kirkham FJ. Diagnostic delays in paediatric stroke. *J Neurol Neurosurg Psychiatry*. 2015;86: 917-921.