

Anticoagulant therapy relatively safe for children with Arterial Ischemic Stroke (AIS)



Summary

Arterial ischemic stroke (AIS) occurs when the blood flow to the brain is blocked. About 75% of children with AIS suffer long-term neurological problems (e.g. cerebral palsy, problems with language, behavior) and as many as 50% suffer from recurrent strokes. Anticoagulant therapy (ACT), which helps prevent blood clots, is often used to treat adults with AIS to prevent recurrent strokes. Although one of the most common side-effects of ACT is hemorrhaging (bleeding) in the brain, risk factors for this condition (e.g. hypertension) are rare in children. Consequently, researchers believe that ACT could be a promising treatment option for children with AIS to prevent recurrent strokes. In this study, which evaluated the safety of using ACT in children with AIS, it was found that children with AIS on ACT had a slightly lower rate of hemorrhaging than children with AIS not on ACT. However, the neurological outcomes tended to be worse in children with ACT-related hemorrhaging. Still, researchers believe that ACT is relatively safe to use in children with AIS. As this study only evaluated the safety of ACT, further research is needed to determine whether ACT is actually effective at preventing recurrent strokes.

About the study

This study analyzed a prospectively enrolled cohort of 123 children (1 month-18 years old) with imaging-confirmed acute AIS and treated ACT during a 14-year period (1992-2005). Another cohort of 92 children with AIS but not treated with ACT was studied to evaluate the risk of intracranial hemorrhage.

What families should know

If your child has AIS, particularly if he/she has been put on ACT in the past month, be aware of signs of hemorrhaging. These signs include: irritability, headaches, facial droop, decreasing level of consciousness, problems with language (e.g. difficulty remembering words, being unable to read, speak or write). If these occur, seek medical attention immediately.

What practitioners should know

As per existing pediatric guidelines, ACT use is recommended over antiplatelet agents in children with AIS from cardiac disease, arterial dissection or major prothrombotic disorders. ACT use for AIS from other causes appears to be relatively safe, but efficacy of this treatment over antiplatelet agents is yet to be determined. As most cases of intracranial hemorrhaging were asymptomatic, routine neuroimaging is necessary to detect subclinical ICH in children with AIS treated with ACT.

Reference

[Schechter, T., Kirton, A., Laughlin, S., Pontigon, A. M., Finkelstein, Y., MacGregor, D., Chan, A., deVeber, G., Brandão, L. R. \(2012\). Safety of anticoagulants in children with arterial ischemic stroke. Blood, 119\(4\), 949-956.](#)