The Emerging Quandary of Childhood Stoke
Better Aim but No Magic Bullet
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See related article, pages 116–122.

Recent advances in the detection of childhood stroke—thanks in large part to the development of noninvasive, low risk neuroimaging—have increasingly put us in the uncomfortable position of diagnosing a stroke in a child but having little idea of what we should do about it. Although new data on stroke recurrence rates in children—as high as 22% despite “best medical management”—have raised our level of alarm,1 advances in our understanding of the etiologies of childhood stroke have made it increasingly clear that we cannot simply extrapolate secondary stroke prevention strategies from adult studies. Outside of the setting of sickle cell disease, we suffer a profound lack of evidence to guide us.

In this issue of Stroke, the providers of the 1-800-NOCLOTS service clearly demonstrate the extent of this crisis in childhood stroke management by presenting their decade of experience performing free telephone consultation to physicians caring for children with ischemic stroke.2 This extraordinary service was initiated in 1994 by the late Dr Maureen Andrews, eminent pediatric hematologist at the Hospital for Sick Children in Toronto. Having fielded phone calls on more than a thousand children with strokes, the authors conservatively estimate that, in the past 7 years, they consulted on $\approx 8\%$ of incident childhood strokes in the US.

This number alone reflects the tremendous uncertainty on the part of clinicians when faced with the management of a childhood stroke. Their data also suggest that although clinicians are largely comfortable with the etiologic work-up of these children (only 16% of callers inquired about diagnostic evaluations), they are in need of guidance regarding treatment. Approximately 9 in 10 callers sought this form of advice.

Despite the dedication of the 1-800-NOCLOTS providers to improve care of children with ischemic strokes, and the value of the expert opinion that they provide, their service is inherently limited by the lack of available evidence to guide care. Recently published childhood stroke guidelines, although laudable and appreciated, are similarly of limited utility.3 With only one published clinical study of secondary stroke prevention in children—a small, nonrandomized observational study suggesting the relative safety of aspirin and low molecular-weight heparin in this setting—we are decades behind in knowledge compared with adult stroke.4

A recent review article carefully identifies specific areas of clinical equipoise in pediatric stroke management, and proposes potential randomized controlled trials.5 The sample size estimates are sobering and intimate that only large, well-funded multicenter studies can conceivably address these questions. However, the impressive number of childhood stroke patients referred to the 1-800-NOCLOTS service suggests that this same service could potentially provide an effective mechanism for identifying subjects for a clinical trial. By making a commitment to this substantial effort, our ability to care for children with stroke may catch up with our ability to simply make the diagnosis.

References

The opinions in this editorial are not necessarily those of the editors or of the American Heart Association.

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