

Headaches in Childhood

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Although pediatric headache disorders are ubiquitous, they have remained a relatively understudied area of pediatric neurology. The prevalence of headaches is increasing.¹ In Finland, 52% of seven-year-old children reported headaches in 1992 compared to 14% in 1974.² Overall, headaches affect approximately 75% of children³ and rank third among illness-related causes of school absenteeism.⁴ In Canada more than 25% of 12-13 year olds experience at least weekly headaches.⁵

Understanding these changes in prevalence and devising optimal management strategies will depend on further research which must provide a greater understanding of the pathogenesis, the roles of genetic and environmental factors, the classification and validity of headache syndromes, the natural history of childhood headaches and both the short and long-term response to therapy.

Despite advances in our understanding of the pathogenesis of migraine,⁶ the roles and interactions of genetic and environmental factors remain to be clarified. In Finland, the prevalence of migraine in Swedish-speaking children was almost twice that of Finnish-speaking children.^{7,8} The causes of this variance in prevalence are unknown. Understanding the factors which define the susceptibility to headaches will enhance our ability to formulate approaches to appropriately prevent and treat headaches in children.

The International Headache Society (IHS) has undertaken the daunting task of classifying headaches. The previous iteration of this classification was not easily applied to the pediatric population.⁹ The most recent version of the IHS classification was undertaken without the benefit of a specific pediatric working group¹⁰ and has not yet been studied in a pediatric population. The value of a symptom-based classification can be questioned as many children who present with exclusively migraine headaches will have tension-type headaches (TTH) on follow-up.¹¹ Similarly those with TTH are likely to have migraine as adults.¹¹ In this issue of the journal the two papers by Dr. Seshia represent a large case series of 463 children from his practice over a three-year period. The headaches in the vast majority of those with chronic daily headaches were transformed from recurrent headaches and more than 1/4 had features of both migraine and TTH. Similarly among the patients with recurrent headaches almost 1/3 had mixed migraine and TTH. This data supports the concept that migraine and TTH represent points on the spectrum of a headache continuum.¹²

There is clearly a need for a great deal more research into the various aspects of childhood headaches. The papers by Dr. Seshia provide valuable insight into the characteristics of children with headaches. They emphasize the importance of expert management of these children. Very few of his patients required investigations and overall the vast majority was greatly improved on follow-up with few needing medications. In spite of Dr. Seshia's useful addition to our understanding of headaches in children, many unanswered questions remain.

The place of pediatric migraine-associated syndromes, such as the Alice in Wonderland syndrome, is also poorly understood. In the 2004 IHS classification the inclusion of these syndromes is incomplete. These unusual cortical phenomena will likely provide interesting insights into the pathogenesis of migraine.

Hopefully research will allow future versions of the IHS classification to incorporate the pathogenesis of the various clinical headache types. For a classification system to be of clinical value, headache types and syndromes must relate directly to specific management strategies and/or prognosis.

The role of investigations in the evaluation of children with headaches represents a better studied area which is no longer contentious. It is currently agreed that routine diagnostic studies are unnecessary unless risk factors are identified in the history or the examination is abnormal.¹³

The management of childhood headaches has depended on a variety of behavioral, pharmacologic and alternative therapies. Relatively short-term follow-up studies have indicated that most patients have a significant improvement in their headache severity and frequency without medication. There is less data available on the natural history of pediatric headache through long-term follow-up, although the majority of children continue to experience headaches.¹¹ Few medications used to treat childhood headaches have been subjected to rigorous evaluation.¹⁴ Randomized control trials of medications for pediatric headaches are usually complicated by large placebo responses. It is, therefore, not surprising that the majority of medication trials have failed to provide evidence of therapeutic effectiveness.¹⁴ Medications which have proven valuable in treating adults often fail to have similar value in children. Children are usually more accepting of nonpharmacological therapies than adults. Understanding this difference might provide insights into how headaches in adults could be managed using a less pharmacologically based approach. While most children do not require pharmacotherapy, there is a group who do require prophylactic or acute pharmacologic therapy beyond simple analgesia. These patients need to be identified and indications for such management clarified. A management strategy that could alter the natural history of headache would be desirable over current strategies which attempt to minimize the impact of ongoing headaches.

A significant proportion of Canadian youth live with headaches. As pediatric neurologists we encounter a small proportion of these children and young adults within our clinics where our primary responsibility is to provide them with successful management strategies. Our challenge and goal must be to evolve from an evidence-poor to evidence-enriched approach to pediatric headache. Much remains to be learned.

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