Is MRI needed in children with a sports-related concussion?

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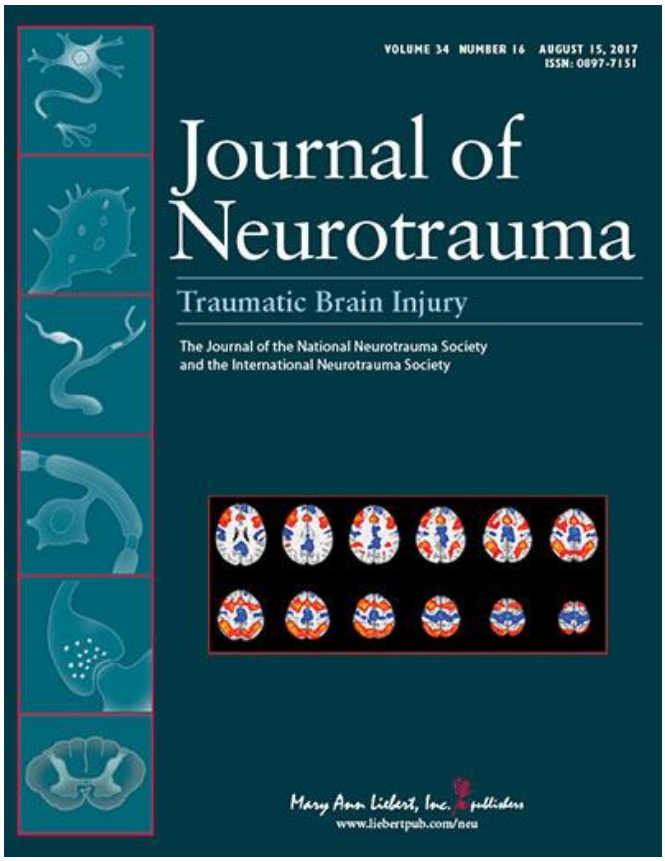

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A new study reviewed more than 5 years of records of pediatric patients treated for sports concussion, the most common form of traumatic brain injury (TBI) among children, to determine if magnetic resonance imaging (MRI) revealed structural changes to the brain that may be related to persistent symptoms. The findings are reported in an article published in *Journal of Neurotrauma*.

Robert Bonow, MD and a team of researchers from University of Washington and Seattle Children's Hospital, Seattle, WA, coauthored the article entitled "Prevalence of Abnormal Magnetic Resonance Imaging Findings in Children with Persistent Symptoms after Pediatric Sports-Related Concussion."

Structural injury is uncommon in sports concussion in children, although nearly 13% of the children in this study underwent MRI. Whereas in adults concussion symptoms tend to resolve within several days, post-concussive effects such as headaches, irritability, and cognitive difficulties may persist for a month or more in about 25-30% of children. The current study indicated that MRI in children with persistent symptoms after concussion rarely identified brain injury.

"From the Journal's perspective this is an important communication," says John T. Povlishock, PhD, Editor-in-Chief of *Journal of Neurotrauma* and Professor, Medical College of Virginia Campus of Virginia Commonwealth University, Richmond. "It provides important guidance for those clinicians caring for children with persistent symptoms of concussion. The large sample size and the rigor of the retrospective analyses strongly support the validity of the study's finding that only a small fraction of these children present with routine MRI-detectable intracranial lesions. While not endorsing a prescriptive approach, this report does provide important insight for those clinicians considering conventional MRI in children with persistent concussive symptoms."

More information: Robert H. Bonow et al, Prevalence of Abnormal Magnetic Resonance Imaging Findings in Children with Persistent Symptoms after Pediatric Sports-Related Concussion, *Journal of Neurotrauma* (2017). DOI: 10.1089/neu.2017.4970

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