New MRI technique helps clinicians better predict outcomes following mild traumatic brain injury

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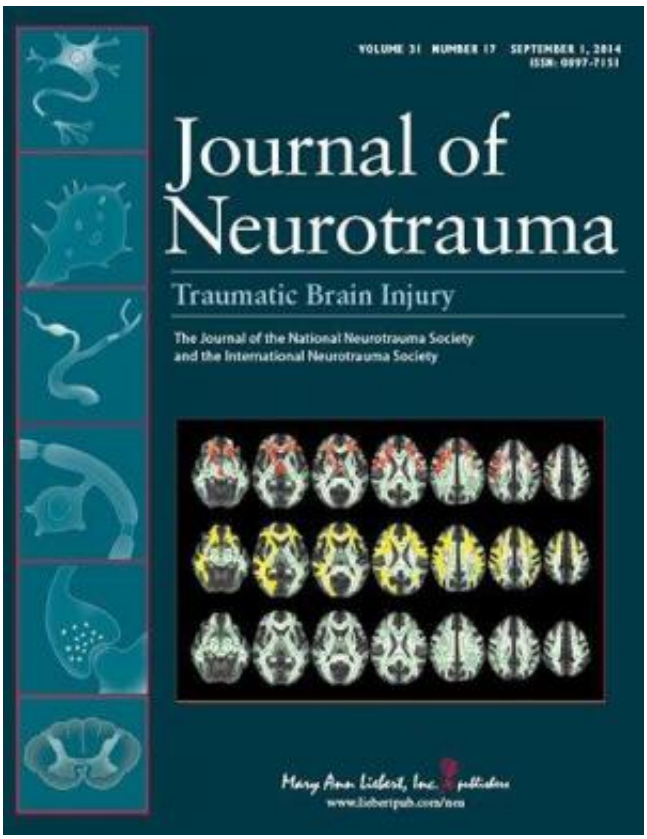

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Diffusion Tensor Imaging (DTI), a specialized magnetic resonance imaging (MRI) technique that detects microstructural changes in brain tissue, can help physicians better predict the likelihood for poor clinical

outcomes following mild traumatic brain injury compared to conventional imaging techniques such as computed tomography (CT), according to a new study published in *Journal of Neurotrauma*.

The ability to predict which patients who experience an acute head injury such as mild traumatic brain injury (mTBI) are likely to suffer ongoing dysfunction 3 or 6 months post-injury is important for providing optimal care. Esther Yuh and coauthors from University of California, San Francisco, Erasmus MC-University Medical Center (Rotterdam, The Netherlands), Mount Sinai School of Medicine (New York, NY), Seton Brain and Spine Institute (Austin, TX), University of Pittsburgh Medical Center (PA), University of Texas (Austin), Antwerp University Hospital (Edegem, Belgium), and University of Cambridge Addenbrooke's Hospital (Cambridge, UK), present the results of the first published study that compares DTI to conventional imaging and clinical factors for outcome prediction in individual patients with mTBI. DTI showed significant differences between the white matter of mTBI patients who had positive versus negative findings on CT and MRI evaluation, as described in the article "Diffusion Tensor Imaging for Outcome Prediction in Mild Traumatic Brain Injury: A TRACK-TBI Study."

John T. Povlishock, PhD, Editor-in-Chief of *Journal of Neurotrauma* and Professor, Medical College of Virginia Campus of Virginia Commonwealth University, Richmond, notes that "this exceptionally well done study addresses an issue of continuing controversy and confusion. The authors make an extremely important observation that MRI studies, including DTI parameters, are integral in informing prognosis after mild TBI. When taken together with the other publications from the TRACK-TBI Study Group, these findings should prove invaluable in assessing the occurrence of mild TBI and informing patient outcome."

More information: The article is available free on the *Journal of*

Neurotrauma website until October 17, 2014.

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