Medical Xpress

Should hyperbaric oxygen therapy be used to treat combat-related mild traumatic brain injury?

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The average incidence of traumatic brain injury (TBI) among service members deployed in Middle East conflict zones has increased 117% in recent years, mainly due to proximity to explosive blasts. Therapeutic exposure to a high oxygen environment was hoped to minimize the concussion symptoms resulting from mild TBI, but hyperbaric oxygen (HBO2) treatment may not offer significant advantages, according to an article in *Journal of Neurotrauma*.

A prospective trial conducted at the U.S. Air Force School of Aerospace Medicine evaluated the benefits of HBO2 therapy on post-concussion symptoms in 50 military servicepersons who had suffered at least one combat-related mild TBI. The study, "The Effect of Hyperbaric Oxygen on Symptoms Following Mild Traumatic Brain Injury," compared the results following 30 sessions of either HBO2 (2.4 atmospheres absolute pressure) or sham treatment over an 8-week period.

George Wolf, MD and Leonardo Profenna, MD, U.S. Air Force School of Aerospace Medicine (San Antonio, TX), David Cifu, MD and William Carne, PhD, Virginia Commonwealth University (Richmond), and Laura Baugh, MD, Uniformed Services University of the Health Sciences Department of Neurology (Bethesda, MD), present data demonstrating that both patient groups showed significant improvement in concussion assessment and cognitive testing scores over the course of the study.

"This is a particularly important communication that addresses a continued area of controversy, particularly as it relates to the treatment of our military personnel sustaining mild traumatic brain injury," says John T. Povlishock, PhD, Editor-in-Chief of Journal of Neurotrauma and Professor, VCU Neuroscience Center, Medical College of Virginia, Richmond. "While the authors stress that based upon their findings, larger multi-center, randomized, controlled, double-blinded clinical trials should be conducted, the compelling data in this communication does not support any therapeutic value for hyperbaric oxygen treatment, striking a cautionary note for those involved in the care and management of this patient population."

Provided by Mary Ann Liebert, Inc

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