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Observations in a population with diffuse traumatic brain injury

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Much has been said in the past decade concerning traumatic brain injured patients. Although each injury is particularly unique, certain general observations can be made of neurologically-driven behaviors that seem to be both reasonably common and associated with this type of sudden, forced movement of the cranial bony structures and the resulting actions within the cerebral soft tissues. The visual pathways and the globe itself are in a unique position to reveal certain aspects of the neural damage. Visual field studies, oculocoherence tomography, and dilated fundus examination can be used to demonstrate vitreous detachments, scotomas, and retinopathy, while other routine testing demonstrates paresis of accommodation, convergence insufficiency, irregular eye movements, and numerous other degradation of binocular function. As an active contributor to the general health care team, the eye care specialist should be aware of at least the most common signs, both focal and global and the associated symptoms. Recent studies have been published that support the contentions of those providers who work routinely with this particular population. While much research remains to be done, the authors of this paper have proposals that seem to at least partially suggest possible physical explanations for several of the most commonly encountered challenges experienced in a significant group of athletes, accident victims and soldiers. This presentation has been developed based upon clinical experience of the traumatic brain injury (TBI) team in a Veterans Health Administration hospital, a team of providers that assesses, diagnoses and provides rehabilitation on an outpatient level to patients who have sustained a wide variety of brain injuries. Principally developed by those who provide this service on a daily basis, the observations are those of rehabilitative neurological professionals and will provide comment on the mechanism of injury, some diffuse effects on the structure and function and an attempt to incorporate approaches and applications of techniques used today in restoration of neuromuscular function in those with traumatic cerebrospinal injury.

Biography

Clifford D Brown serves in the Central Alabama Veterans Health Care System as Chief of the Eye Clinics. He was Senior Health Adviser and Senior Analyst/Operations Chief of National Biosurveillance Integration Center and the U. S. Army Deputy Chief of Eye Services and Behavioral Vision Chief for the Exceptional Family Member Department and served as a rehabilitative consultant for five school districts in USA.