TBI & Neurofeedback

The CDC estimates that 1.7 million traumatic brain injuries (TBI) occur in the U.S. each year, and this does not include most concussions, many of which are never diagnosed as such. About 75% of these TBIs are classified as 'mild' but they frequently can cause persistent problems for an individual long after it has occurred. Common causes of TBIs include: falls such as off a ladder, being struck, motor vehicle accidents, and among military personnel concussive blasts such as IEDs. Sports-related TBI used to be thought of as being a small issue, but recent attention to concussions resulting from sports contact, and permanent damage being done all too often, is changing that perception. But many sports concussions are never diagnosed, with an estimated 3.8 million sports- and recreation related concussions in the U.S. occurring every year.

Common complaints of TBI patients, even those with 'mild' injuries, includes headaches, finding the right word to say, difficulties with learning and remembering, and personality changes such as being more depressed, withdrawn, angry, or irritable. Other common symptoms include mood swings, disinhibition (lacking an appropriate 'emotional brake'), fatigue, anxiety, light and/or noise sensitivity, balance/dizziness problems, and ringing in the ears (tinnitus). Brain injured individuals suddenly lack the ability to regulate their own behavior as needed, and so they may end up in in-patient psychiatric hospitals, or jail.

Probably the most common 'treatment' for TBI is 'time, doing nothing, letting it heal on its own.' Sports players who are taken out of a game for a day, or perhaps a few weeks are an example of this. Psychiatric medications are sometimes tried, to treat issues like depression, anxiety, irritability, and memory/attention issues. In my experience almost none of the patients find such meds helpful as to restoring what has been lost, and moreover, most report the side effects very bothersome and quit taking the drugs. Various forms of rehab such as 'vestibular' for balance problems, or 'cognitive' to improve memory are tried by a small set of TBI patients. The benefit in my experience is slight at best, and usually if it is helpful, it may be more compensatory (e.g. use a smart phone to remind you of stuff you need to do).

Some research has been done with neurofeedback as a means to treat TBIs, and it is considered promising but still in the earlier stages of being proven effective. Most studies on neurofeedback have found benefit to the majority of patients treated, be it on a subjective level of what the patients report, or objective measures such as through 'before and after' testing on skills like memory or depression. Some studies found most of the patients able to return to work after neurofeedback treatment. And perhaps the most impressive results were from one study where thirty-two individuals had been in a deep coma for more than two months, and twenty-five of them came out of it after only one or two neurofeedback sessions, with two more responding to some additional sessions. Given that most 'treatment' of TBI is not notably effective, one option to consider if you or someone you care for has suffered such an injury is neurofeedback.

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