

HANDLING NON-CATASTROPHIC BRAIN INJURY CASES

"WE'VE LEARNED THAT THE BRAIN IS MORE PLASTIC THAN WE ONCE THOUGHT AND THAT DAMAGE CAN COME FROM ITS MOVEMENT WITHIN THE SKULL AFTER A BLOW TO THE HEAD OR TO ANOTHER PART OF THE BODY. WE'VE LEARNED NOT TO BE SURPRISED WHEN BRAIN-DAMAGE SYMPTOMS ARE REPORTED WHEN NO IDENTIFIABLE LOCAL BRUISING OR FRACTURING CAN BE FOUND."

Ayub Ommaya, Professor of Neurosurgery at George Washington University and Chief Medical Advisor to the National Highway Traffic Safety Administration, as quoted in the Wall Street Journal on Wednesday, November 24, 1982.

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I. Recognizing the Injury

Most anyone can recognize the injury when a person has received trauma that has resulted in a severe brain injury. Severe brain injury often results in easily observable symptoms including partial or complete paralysis, speech problems, impaired cognitive functioning, disability from employment, long periods of coma, huge hospital bills, and CT, MRI, and other brain-imaging changes.

On the other hand, the so-called minor head injury can often cause traumatic brain injury and long-term residual problems with symptoms that are not apparent to the casual observer. These symptoms which can occur even without a loss of consciousness¹ at the time of the traumatic event include: headaches, dizziness, lethargy, memory loss, irritability, personality changes, cognitive deficits, and/or perceptual changes. This article will discuss handling litigation for a victim of a so-called minor head injury.

¹Leininger, B.E., et al. Neuropsychological Deficits in Symptomatic Minor Head Injury Plaintiffs After Concussion and Mild Concussion. 53 Neurology, Neurosurgery and Psychiatry 293-296 (1990).

Binder, L.M. Persisting Symptoms After Mild Head Injury: A Review of the Post-Concussive Syndrome. 8 Journal of Clinical and Experimental Neuropsychology 323-346 (1986).

Esselman, P.C. and Uomoto, J.M. Classification of the spectrum of mild traumatic brain injury. 9 Brain Injury 417-424 (1995).

Snoek, Jennett, Adams, Graham & Doyle. Computerized Tomography After Recent Severe Head Injury in Patients Without Acute Intracranial Hematoma. 42 Neurology, Neurosurgery, & Psychiatry 215 (1979).

II. Definition of Traumatic Brain Injury

It is suggested that rather than referring to your client as having suffered a head injury, that it is more accurate and less confusing to refer to your client as having suffered a traumatic brain injury (TBI). In 1986, the National Head Injury Foundation (NHIF), which recently changed its name to the Brain Injury Association (BIA), adopted the following definition which constitutes a useful point of departure for attorneys handling a traumatic brain injury case:

Traumatic brain injury is an insult to the brain, not of a degenerative or congenital nature but caused by an external physical force, that may produce a diminished or altered state of consciousness, which results in an impairment of cognitive abilities or physical functioning. It can also result in the disturbance of behavioral or emotional functioning. These impairments may be either temporary or permanent and cause partial or total functional disability or psychosocial maladjustment.

In addition to the BIA definition, at least two state legislatures have enacted statutory definitions of traumatic brain injury similar to the one adopted by the BIA. For example, the state of Michigan defines TBI as:

An insult to the brain, not of a degenerative or congenital nature, that may produce a diminished or altered state of consciousness, and which results in impairment of cognitive abilities or physical functioning.²

Similarly, the state of Georgia defines TBI as:

²Mich. Comp. Laws Ann. 333.5413

[T]raumatic insult to the brain and its related parts resulting in organic damage thereto which may cause physical, intellectual, emotional, social, or vocational changes in a person.^{3,4}

The state of Indiana has not yet adopted a statutory definition of traumatic brain injury.

One widely-accepted definition of mild traumatic brain injury (MTBI) had been developed by the American Congress of Rehabilitation Medicine (ACRM). Important aspects of this definition include the following:

1. Loss of consciousness is not required for there to have been a traumatic brain injury.
2. If loss of consciousness does accompany a traumatic event, it is for a period of time of 30 minutes or less.
3. Some altered state of consciousness at the time of the occurrence is expected (dazed, disoriented, and/or confused).

The traumatic events that can cause an MTBI include:

1. The head being struck;
2. The head striking an object; and,
3. The brain undergoing an acceleration/deceleration movement (i.e. whiplash) without direct external trauma to the head.

³Ga. Code Ann. 37-3-1(16.1).

⁴See also Minn. Stat. Ann. §144.661, Subd. 2; Minn. Stat. Ann. §256B.093, Subd.

4.

This definition **excludes** brain damage caused by stroke, tumor, and anoxia.⁵

The American Academy of Neurology (AAN) has not adopted a definition of MTBI; however, they are working on practice parameters for MTBI which are in the draft stage and should be published within the next year. Significantly, the AAN's practice parameters for the management of concussion in sports include the following statement:

⁵The definition of MTBI was developed by the Mild Traumatic Brain Injury Committee of the Head Injury Interdisciplinary Special Interest Group of the American Congress of Rehabilitation Medicine. J. Head Trauma Rehabil. 1993; 8(3): 86-87.

Definitions. **Concussion is a trauma-induced alteration in mental status that may or may not involve loss of consciousness.** Confusion and amnesia are the hallmarks of concussion. **The confusional episode and amnesia may occur immediately after the blow to the head or several minutes later.** Close observation and assessment of the athlete over some period of time is necessary to determine whether evolving neuropathologic change associated with concussion will lead to a confusional state or to the development of memory dysfunction. A history of recent head trauma outside the sports setting, such as a motor vehicle accident, should be considered in the evaluation of an athlete with concussion.⁶

⁶Practice Parameter: The Management of Concussion in Sports (Summary Statement). Neurology 1997; 48:581-585. (Citations omitted and emphasis added.)

Grade 1 and Grade 2 concussions occur with no loss of consciousness, and a Grade 3 concussion occurs with any loss of consciousness, whether it be for seconds or minutes.⁷

It is important for the attorney handling a non-catastrophic brain injury case to understand that often such brain injuries cause dysfunctions which do not show up on standard medical brain imaging tests, such as the CT or MRI evaluations.⁸ In fact, the definition developed by the American Congress of Rehabilitation further defines a mild traumatic brain injury as one where loss of consciousness does not exceed thirty minutes, where posttraumatic amnesia is not greater than 24 hours, and where CTs, MRIs, EEGs, or routine neurological examinations may be normal.⁹ Therefore, a health care provider or attorney has to listen to the symptoms or complaints of the individual before the possibility can be considered that the client may have sustained an MTBI. Many times, unfortunately, the emergency room evaluation of individuals who have sustained an MTBI is very cursory. Often, the exam will include the following notations: “Ø LOC, oriented x 3,” suggesting a history of no loss of consciousness and that the patient was oriented to person, place, and time. An attorney should not be misled into believing that these findings preclude the possibility that the patient sustained an MTBI if the patient reports symptoms consistent with such an injury.

Medical literature indicates that the persistent symptoms at times associated with an MTBI result

⁷Id. A copy of the “Management of Concussion in Sports” card, detailing the grades of concussion and management recommendations, is attached to this article.

⁸Sewick, B.G., Ph.D. *Neuropsychological Examination of Closed Head Injury Patients. The Brain Injury Case: Legal and Medical Issues* (1997).

Singer, W.D. *The Evaluation of TBI Neurodiagnostic Tests. The Brain Injury Case: Legal and Medical Issues* (1997).

⁹*J. Head Trauma Rehabil.* 1993; 8(3): 86-87.

from the micro shearing of nerve tissue and abrasions to the brain which are not demonstrable using common brain-imaging techniques. These symptoms are present in MTBI patients because of diffuse axonal injury, which is a wide-spread disruption of axons in various areas of the victim's brain.¹⁰ Postmortem examination can reveal physical damage to the brain that was not detected by brain-imaging techniques.¹¹

III. Proof That A Traumatic Brain Injury Has Occurred.

Because by definition an MTBI cannot be established using a standard brain-imaging test, a typical defense asserted in a lawsuit is that the negative results in the various brain scans indicate that the plaintiff has not suffered an MTBI. This defense usually includes claims that the plaintiff is a malingerer, neurotic, interested in secondary gain, and/or was not "playing with a full deck" prior to the injury.

Counsel for the MTBI victim should be prepared to point out to opposing counsel and obtain concessions from the opposing counsel's medical experts that:

1. Some severely injured patients have normal CT scans;¹²
2. Patients with Alzheimer's disease may have lesions or diffuse brain injury which is undetectable in routine reading of either CT or MRI;¹³ and

¹⁰Barth, J.T., et al. Neuropsychological Sequelae of Minor Head Injury. 13 Neurosurgery 529 (1983).

Binder, *supra* at note 1.

¹¹Rimel, et al. Disability Caused By Minor Head Injury. 9 Neurosurgery 221 (1981).
[Where neuronal loss was found in a postmortem examination of a patient who had suffered a concussion and who had no clinical evidence of brain damage.]

¹²See notes 6 & 7, *supra*.

¹³Gur & Gur. The Use of Neuroimaging Techniques in Brain Injury. Neuropsychology

3. Epileptics may have normal CT or MRI studies.¹⁴

Thus, the absence of positive findings in such brain-imaging tests is of relatively little importance in diagnosing an MTBI case.

Furthermore, there are medical studies available which show that in MTBI cases, pending litigation has at best a negligible effect on the ultimate adjustment and prognosis achieved by MTBI victims.¹⁵ These studies can be used to counter the suggestion of the defense expert that the plaintiff is delaying his/her progress by either consciously or subconsciously “producing” MTBI symptoms. The studies also argue against the defense that symptoms resolve when lawsuits are completed.

Two key medical experts that will almost always be necessary in establishing an MTBI case are a neurologist and a neuropsychologist. Although the brain-imaging tests are normal in these types of cases, a neurologist will be able to explain the micro shearing of nerve tissue and abrasions to the brain which can occur and which are not demonstrable using common brain imaging techniques. Further, the neurologist, when armed with the medical studies noted above, will be able to explain that severely injured patients, Alzheimer’s victims, and epileptics can all have normal brain imaging test results.

In my experience, most neurologists, when treating someone with the sequelae of an MTBI, will

and the Law: 165 (1991).

¹⁴Gastaut. Clinical and Electroencephalographic Classification of Epileptic Seizure. 11 Epilepsia 102 (1970).

¹⁵Mendelson, (1984). Not “Cured By A Verdict”: Effect of Legal Settlement on Compensation Claimants. 2 Med. J. Australia 132 (1984).

Follow-up Studies of Personal Injury Litigants. 7 J. Law & Psychiatry 179 (1984).

Rimel, *supra* at note 8.

eventually refer the patient for neuropsychological testing. Such a referral will not usually take place until six months or so post-injury because often the symptoms of an MTBI resolve with no long-term residuals.

It is beyond the scope of this article to get into a detailed discussion of who and what neuropsychologists are.¹⁶ What an attorney needs to understand about neuropsychologists is that they use highly standardized tests to verify the existence or absence of subtle changes in brain function.

The following is a list of important questions that a neuropsychologist often will be able to answer after testing the victim of an MTBI:

1. The level of brain functioning;
2. The areas of dysfunction in the brain;
3. The areas of normal functioning in the brain;
4. Whether or not a particular traumatic event constitutes a competent cause for the injury claimed (this opinion will often be given in conjunction with the opinion of the neurologist); and
5. How the individual's brain functioning will affect his or her relationships and ADLs at home, in the workplace, and socially.

¹⁶Most jurisdictions allow neuropsychological testimony to establish the existence of a brain injury. These jurisdictions rely on Federal Rule of Evidence 702 and look to the medical background of the individual neuropsychologist/psychologist. A majority of the jurisdictions also allow the neuropsychologist or psychologist to testify as to causation. The Indiana Court of Appeals has addressed this question and similarly looked to the qualifications of the individual neuropsychologist or psychologist in determining whether they are competent to testify as to the existence of a brain injury. See Indianapolis Union Ry. v. Walker, 318 N.E.2d 578 (Ind. Ct. App. 1974).

The tests which the neuropsychologists use have been in use for many years. Further, almost any neurologist or neurosurgeon will acknowledge that they often refer patients to neuropsychologists to have the brain-functioning tests administered. The tests used by a neuropsychologist measure in much greater detail than the medically-based brain imaging tests the following functions controlled by the brain:

1. Attention and concentration;
2. Motor functioning;
3. Sensory and perceptual functioning;
4. Speech and language abilities;
5. General intellectual level;
6. Executive functions;
7. Memory and learning; and
8. Emotional and personality features.

In my experience, defense attorneys have vigorously attacked the credentials, competency, and results of neuropsychological testing. Therefore, it is important that you provide the neuropsychologist in your case with all of the relevant information concerning your client. This information should include a great deal of background information on the client including the following sources:

1. Work history and work records;
2. School records and test results;
3. Prior medical records; and
4. Medical records from the neurologist and medical records related to the traumatic event in question.

In addition, the attorney for the MTBI plaintiff will also need to be prepared to establish through family, friends, employers, and co-employees how the injured person is different since the date of the

traumatic event. The attorney will want to establish the pre-accident absence of difficulties with work, recreation, motivation, goals, emotional status, memory, and other activities of daily living.

IV. Deposition and Trial Testimony of the Traumatically Brain Injured Victim.

The symptoms and sequelae of MTBI often make the injured party a difficult witness. Memory problems, emotional problems, and lack of motivation will often make it difficult to prepare the MTBI plaintiff for his or her deposition and trial testimony. Oftentimes, he or she will have difficulty remembering the accident itself. Also, the attorney should anticipate his or her client being subjected at their depositions and at trial to a great deal of probing about their past life in an attempt to establish another explanation for the post-accident level of difficulties.

One way to deal with this difficulty is to spend extra time with the MTBI client and his or her family (and significant others) in preparation for their testimony. Also, it is helpful to obtain the assistance of family, friends, employers, and co-employees to corroborate your contention that your client is not the same person he or she used to be.

V. Cross-Examination of the Defense Doctor.

Counsel for the MTBI victim should be armed with medical studies that confirm the presence of MTBI without corresponding changes in standard brain imaging tests. Also, counsel should be armed with articles and studies establishing that the long-term sequelae from an MTBI are not materially affected by ongoing litigation.

In deposing the defense expert, it is first necessary to obtain the IME report and the expert's CV. These should then be reviewed with your experts. It is also helpful to obtain prior testimony given by the defense expert in other depositions and trials.

The following are preliminary areas of examination with the defense expert:

1. How many MTBI patients he or she has treated;
2. What is the extent of his or her education and training in brain injury;

3. Whether he or she has written any articles or participated in any studies concerning MTBI;
4. What is his or her familiarity with the literature concerning MTBI; and
5. What materials has he or she reviewed in preparation for the consultation and testimony in the case.

After getting through the preliminaries, the following are seventeen areas which may be helpful to explore with the defense expert:

1. Are there certain tests particularly sensitive to MTBI and did the expert give them all or review them in this case?
2. What patterns of test results would indicate MTBI?
3. How important is the clinical and historical picture as well as the testing? (For example, “Is it true that the more facts you have the better able you are to solve the mystery?”)
4. Is it helpful to talk with co-workers and family members in diagnosing MTBI, and did you do so?
5. Is my client malingering or faking? Is he or she exaggerating?
6. Is post-concussion syndrome (PCS) or MTBI a valid diagnosis?¹⁷

¹⁷The Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM IV), does not include MTBI as an official category or axis. Rather, “postconcussional disorder” is listed in Appendix B as a Criteria Set and Axis Provided for Further Study. The proposed criteria require a loss of consciousness; however, it is noted that further research is required to define the criteria. DSM IV, Appendix B, (704-706).

But see “Concussion With No Loss of Consciousness.” International Classification of Disease Manual, Ninth Revision, Fourth Ed., 1992, Sec. 850.0.

Levin, et al. Mild Head Injury. p. 3.

7. What is a concussion? What is trauma? Is PCS or MTBI caused by trauma?
8. Will he or she accept the use of the phraseology post-traumatic brain injury syndrome?
9. Discuss the mechanics of brain injury with the defendant, including:
 - A. Do you need a blow to the head to sustain a brain injury?
 - B. Is the brain damaged in a concussion type of injury?
 - C. What is the consistency of the brain (water and fat)?
 - D. What affect do the sharp edges of the skull have when the brain comes into contact with them?
10. Can the brain be injured without a loss of consciousness (i.e. is altered consciousness or disorientation evidence of a concussion type of injury)?
11. Is it common for an MTBI victim to have a normal neurological exam, x-ray, CAT Scan, MRI, and EEG?
12. Are the symptoms of MTBI parallel or consistent with a post-concussion syndrome, including:
 - A. Physical symptoms of headaches, fatigue, dizziness;
 - B. Cognitive problems with memory and concentration;
 - C. Executive functioning difficulties;
 - D. Behavioral problems; and
 - E. Emotional problems, including depression?
13. What are my client's symptoms by history? Are these symptoms consistent with MTBI?
14. What role did the traumatic event play in causing my client's injury (regardless of your diagnosis)?
15. What is the accepted recovery period for post-concussion syndrome or MTBI? Can post-concussion symptoms be permanent or chronic? Isn't it true that the longer it lasts, the more likely it is to be permanent?
16. Are my client's symptoms interfering with his or her daily activities? Did you even ask this question?

17. What is your diagnosis? It is important to obtain a diagnosis from the defense expert.

VI. Summary.

The non-catastrophic brain injury case or MTBI case is a very challenging case. Unfortunately, it can also become a very expensive case as well. In addition to experts necessary to prove damages, liability experts are often also required.

Finally, I would urge any attorney handling a brain injury case to reconsider becoming a member of the Brain Injury Association of Indiana (BIAI). BIAI is a group of survivors, interested professionals, and family members of survivors all working to improve the lot of those persons throughout Indiana who have sustained a brain injury. BIAI needs your support, and in becoming a member you will receive their quarterly publication "The Amplifier", and you will have access to information concerning treatment facilities and support groups for your client and your client's family. If you are interested in joining BIAI or if you have any questions about the organizations, please call their Indianapolis office at (317) 356-7722.