

## **CREATIVE DEMONSTRATIVE EVIDENCE: “ADDING THE MIDAS TOUCH”**

### **A. Introduction**

We all know that the use of demonstrative evidence can be crucial to the jury’s ability to understand complex issues at trial. There may be no area of litigation where demonstrative evidence is more important than in cases involving brain injuries. I have read that the brain is the least understood part of the human body even in the medical and scientific communities. Further, the vast majority of brain injuries are not visible to ordinary people. It is therefore easy to understand the particular challenge that attorneys face when trying to persuade a jury that a client’s brain injury, especially a mild brain injury, is real, is permanent, and is deserving of compensation. This paper will address the various types of demonstrative evidence available to assist attorneys in successfully prosecuting brain injury cases.

In the easiest case, a severe brain injury will be readily apparent on structural brain imaging tests such as an MRI and CT scan. A treating physician or the plaintiff’s expert witness can use blow ups of the CT scans and MRIs to point to the actual hemorrhagic sites and lesions of the brain and to educate the jury on the consequences of an injury to that area of the brain. It is also possible to get colorized MRI images and to construct computerized 3-D models of brain damage from CT scans and MRIs that may be easier for the jury to understand. In these cases the imaging tests and any 3-D models are powerful demonstrative tools to show the jury the exact damage to your client.

The problems occur in cases of mild brain injury where the CT scan and/or MRI show no damage and normal brain function, and the client appears outwardly normal. Mild brain injury can occur where there is trauma to the brain, but the trauma results in only brief unconsciousness. These injuries are generally microscopic, occurring at the cellular level, and

therefore are not demonstrated on a CT scan or even an MRI. Most people suffering such mild traumatic brain injuries recover, but there is a minority, sometimes referred to as the “miserable minority” or the “walking wounded,” who, while they may appear normal, are permanently impaired and suffer real hardships as a result. The attorney’s mission in these cases is to make this invisible injury visible to the jury, and demonstrative evidence can be of great assistance.

### **B. Medical Illustrations and Anatomical Models**

One of the attorney’s first jobs is to use a physician or neuropsychologist to educate the jury on brain anatomy and function. The use of medical illustrations and anatomical models in this context can be enormously helpful because most people are not familiar with these issues.

Functional brain models are often multi-colored to demonstrate the various regions of the brain by function and help the jurors understand how damage to the brain in a particular area will affect different functions. Detailed colorful exhibits can also demonstrate how the damage may be microscopic in nature and therefore not visible on traditional structural imaging studies. If appropriate, they can detail how the neurons and axons of the brain are connected, and how any shearing, twisting or compression of them can lead to serious problems.

One drawback of anatomical models is that they are often hard and plastic and therefore fail to convey the consistency and fragility of the human brain. To overcome this obstacle, some creative plaintiff’s attorneys use Jell-O molds of the human brain to educate the jury. Another drawback is that the models are not case specific. However, there are medical modeling companies that are able to construct custom anatomical models from the patient’s imaging studies and thereby provide the jury with an exact physical reproduction of the client’s injury.

If appropriate to the case, you can also have an expert witness or treating physician use an anatomical model of the brain and skull to demonstrate how the brain and skull reacted with

any acceleration and deceleration in a traumatic event. The physician can explain that the skull is rigid but the brain has the consistency of Jell-O. With the aid of a model it is much easier to explain how any rapid changes in the direction of the movement of the skull and brain can cause the stretching and shearing of brain tissues.

### **C. Excerpts From The Medical Records and Imaging Studies**

As in any personal injury case, blow ups of the pertinent medical records can greatly assist the jury because they can constitute objective evidence of an injury. Important records in brain injury cases can include the ambulance trip report, the emergency room nursing and physician assessments, and the imaging studies. For example, you can highlight the ambulance report's references to disorientation, a period of unconsciousness, or bruising or lacerations to the head. You can blow up or highlight similarly helpful information from the initial emergency room history and nursing assessment, as well as any low Glasgow Coma Scale score or record of post-traumatic amnesia. And, as mentioned above, severe damage demonstrated on a CT scan or MRI may be all the demonstrative evidence needed in some cases.

If the standard imaging studies do not demonstrate the injury, any functional brain imaging scans may be of assistance. These scans are likely addressed by other speakers, but for purposes of this discussion PET and SPECT scans are imaging studies that evaluate how the brain works. Both scans show the specific effect of brain injuries on brain function, in contrast with standard MRI and CT scans that look at brain structure. The scans can be correlated with the cognitive, emotional and physical deficits from which the client suffers. Other advanced MRI tests are becoming available, such as functional MR imaging studies and diffusion tensor imaging. Hopefully in the future these tests will give us additional resources to prove and explain brain injuries that may otherwise be invisible.

Blow ups of the subsequent medical records and images can also be significant. Examples include records documenting the length of any coma, an MRI documenting ventricle enlargement (which can be contrasted with the initial CT scan images), and records from rehabilitation specialists and neuropsychological testing.

#### **D. Videos, Photographs and Day in the Life Videos**

One essential use of videos and photographs is to help demonstrate the severity of the injury. You can effectively use videos and photographs of the patient taken in the hospital to show the plaintiff's state immediately after the injury and contrast it to the plaintiff's appearance at trial (which can be markedly better, especially with mild to moderate brain injuries). You may also use videos of any treatment performed, including the use of ventilators or other invasive medical devices, to demonstrate the severity of the injury. Critical photographs should be enlarged and reproduced into several copies so that the witnesses can mark on them if necessary. If there are numerous photographs, slides made from the photographs should be considered.

A Day in the Life videos can be enormously effective in showing the consequences of a brain injury. These videos generally consist of short (ten to fifteen minutes) video footage of the plaintiff, usually in his or her home environment, in the performance of the daily activities that we all take for granted, including eating, bathing, other grooming, getting dressed, and going to different appointments or activities. In appropriate cases the video can also include footage of the plaintiff at work (which can be contrasted with co-worker or supervisor testimony about the plaintiff's pre-trauma work capabilities, job performance evaluations, etc.). These videos can be extremely compelling, but it is important to make them tasteful and somewhat objective to avoid any claims that they should be excluded as unduly prejudicial.

A related important use of photographs and videos is to demonstrate the change in the plaintiff as a result of the injury. It is therefore essential to gather photographs and videos of the plaintiff prior to the trauma showing a happy and healthy life for contrast with the Day in the Life video and the personal appearance of the plaintiff in the courtroom.

One note about the plaintiff's appearance in the courtroom: particularly in a case of severe disability, the plaintiff's appearance can create an uncomfortable situation for everyone, including the jury. In the past we have found that using the life care planner to actually work with the plaintiff in the courtroom while explaining his or her medical and rehabilitative needs can be an excellent way to diffuse any uncomfortable feelings as long as the demonstration is tasteful and above all completely respectful of the plaintiff's physical and emotional capabilities.

#### **E. Other Demonstrative Evidence**

Numerous other types of demonstrative evidence can be useful in prosecuting brain injury cases. At the outset you can use blow ups with bullet points explaining subjects such as the Glasgow coma scale, the classification of brain injuries, or the neuroimaging indicators of poor outcome. Charts and timelines can be useful to demonstrate the degree of medical treatment and rehabilitation the plaintiff may have undergone. An exhibit listing the plaintiff's symptoms and divided into physical, cognitive, and personality/social problems can also be effective. Other examples include a chart depicting the normal daily activities of the plaintiff before and after the trauma and blow ups contrasting the plaintiff's job performance evaluations from before and after the trauma.

#### **F. Conclusion**

The various types of demonstrative evidence discussed above can be vitally important in the successful trial of a traumatic brain injury case. Demonstrative evidence such as medical

illustrations, anatomical models, and 3-D models available from companies specializing in litigation is now sophisticated and widely available. In addition, the development and acceptance of imaging studies that demonstrate brain function can be enormously helpful. Any attorney with a brain injury client should investigate these and other types of demonstrative evidence well in advance of settlement presentations or trial because they can help make an otherwise difficult case.