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Traumatic Brain Injury

Do You See What I See?

Jacobus Donders

TRAUMATIC BRAIN INJURY

Traumatic brain injury (TBI) occurs when there is an acute, external force to the head, which may result in transient alteration of consciousness and/or compromise of brain matter. It is one of the most common acquired neurological conditions, but the vast majority (> 80%) of all cases of TBI can be classified as mild in the sense that they are associated with no or minimal (< 30 minutes) loss of consciousness, limited (< 1 day) posttraumatic amnesia, and no acute intracranial findings on computed tomography (CT) or magnetic resonance imaging (MRI) of the brain. Recent literature reviews suggest that mild, uncomplicated TBI is rarely associated with persistent neuropsychological sequelae (Iverson, 2005; Schretlen & Shapiro, 2003). Yet, cases of mild TBI are encountered increasingly in the medical–legal arena pertaining to personal injury claims in civil court.

In this chapter, I review a case from my own practice that involved a claim of neurobehavioral impairment, more than 1 year after mild TBI. I had done the original neuropsychological evaluation of the plaintiff, which was subsequently critiqued by a different psychologist who was involved with his treatment, and I was then asked to comment on that other psychologist's review. There was additional follow-up after the plaintiff psy-

chologist was deposed by the attorney who had retained me. Eventually, the case was settled out of court before my scheduled deposition was taken. Some of the specific identifying information in this case description has been altered to protect privacy, but the psychometric test results and quotations are identical to the original texts.

PROFESSIONAL APPROACH

Neuropsychological independent medical–legal evaluations (IMEs) make up about 15% of my practice at a private, not-for-profit rehabilitation hospital, and the majority (> 70%) of these involve cases of TBI. I never advertised to seek these kinds of referrals, nor did I make any attempts to cultivate them. It is probably most accurate to say that the referrals found me because I had been practicing in the local community for several years and was doing quite a few clinical neuropsychological evaluations in the context of rehabilitation. Some of those cases eventually involved claims of long-term impairment or disability, leading to legal procedures where I was typically called to testify in depositions as a treating doctor or fact witness. Gradually, I started getting referrals directly from attorneys who had cross-examined me during such processes. Currently, the vast majority (> 90%) of these IME referrals come from representatives of the defense—typically either an attorney defending a person who is being sued as being at fault in a motor vehicle accident and therefore potentially responsible for the plaintiff's subjective symptoms or an insurance company that is questioning the causal relationship between an accident and the plaintiff's ongoing subjective complaints.

I typically use three criteria to determine if I am willing to accept a referral for an IME. First, the subject matter has to be within my area of expertise. For example, I have little training in child-custody issues and I therefore do not accept referrals for that purpose. Second, there should be no potential conflict of interest. For example, if the person who is to be examined by me in an IME has previously or concurrently been served on a routine clinical basis through my department or even another service in the hospital that employs me, I do not want to be in a position of wearing two different professional hats simultaneously. Incidentally, I only do neuropsychological evaluations through the hospital that employs me, and I have no financial incentive to do more IMEs because my salary is the same, regardless of whether I see a clinical patient who is on Medicare or a person in the context of an IME where the reimbursement is at a relatively higher rate. My third criterion to evaluate the appropriateness of an IME referral is that I need to have a clear understanding with the referring party that all relevant records will be made available to me and that I will be expected to

provide an unbiased and objective work product, be it a verbal or a written report. Specifically, I make it clear that it is my expertise that can be hired but not my opinion.

Some of the referrals I receive from attorneys, insurance case managers, or IME coordinators involve strictly file reviews. With these, I always make it clear what the limits of such reviews are, consistent with the professional guidelines for psychologists (standard 9.01.b; American Psychological Association, 2002). For example, I typically indicate that I do not feel comfortable making a definitive diagnosis without directly interviewing or otherwise examining the person in question. Several years ago, I reviewed a case file in which a person had demonstrated some isolated but atypical and inconsistent test results after an apparently mild TBI. Most striking were extremely poor results on the Tactual Performance Test, in a manner that did not seem to correspond to any other test results of sensory–motor, perceptual, or problem-solving skills. Rather than concluding that this was simply an aberrant finding or that it might have been the result of insufficient effort, I suggested an interview with this woman to help clarify this and some other unusual aspects of her presentation. It was at that time that I learned that she had previously been the victim of a sexual assault. Apparently, the Tactual Performance Test (blindfold and all) had been administered by a male psychometrist, as one of the first tests in the battery. It was not difficult to imagine how this might have confounded the findings, but, unfortunately, the assault history had not been included in the original report. This is an example of how exclusive reliance on medical records may not be sufficient to form a diagnostic opinion.

IMEs typically involve more of a direct interview with, and examination of, the individual who is claiming acquired neurobehavioral impairment. I typically review available academic, medical, and other relevant records before the interview, so that I have at least some understanding of the background and history of the case. For example, if I know that the person has taken a specific test twice already within the last year with different providers, with unremarkable results on both occasions, I may not necessarily be inclined to repeat that same test again. When possible and allowed, I also interview a spouse or other family member for collateral information.

Occasionally, I receive requests to have a third person present during the evaluation, usually the plaintiff attorney or his or her designee. My standard policy in this regard is that I allow the presence of such a third party during the interview but not during the formal psychometric assessment. Typically, I refer to guidelines from national professional organizations in this regard (American Academy of Clinical Neuropsychology, 2001; Axelrod et al., 2000) as well as to empirical research that has documented the threats to the validity of test results under such circumstances

(Constantinou, Ashendorf, & McCaffrey; 2005; Lynch, 2005). Although this matter is governed by specific laws in some jurisdictions, judges in the state of Michigan (which is where I practice) have considerable leeway in their determination of whether to grant attorneys' requests for third-party observers or to agree with my objections to such. If it is decided that the evaluation may not proceed without a third party present during the psychometric assessment, I typically withdraw from the case.

Once I am able to proceed with the actual IME, I first explain the contingencies to the individual. For example, I indicate who had referred him or her to me and what a neuropsychological evaluation involves. I emphasize that I have no financial stake in the outcome of the legal dispute in question and that my opinion will be objective. I make it clear that we will not have a treating doctor–patient relationship, that the usual limits of confidentiality do not apply, and that I will not be able to provide the examinee with direct feedback about the test results or any treatment recommendations. I also underscore that it is very important for the examinee to consistently do his or her best and to be truthful at all times. I then document the examinee's level of understanding of all of this and at least his or her verbal agreement for the assessment to proceed (some examinees refuse, at the advice of council, to sign any consent forms).

CASE STUDY

Background

Mr. Smith was a 25-year-old, single, right-handed, Caucasian man with 13 completed years of education who was referred to me by an attorney representing a defendant who was being sued by Mr. Smith for alleged sequelae of an accident in which Mr. Smith had been involved as a helmeted bicycle driver, about 20 months prior to my evaluation. Mr. Smith had taken several semesters off from college following the accident, and he had completed some outpatient physical and speech therapy during that time but had not undergone a prior neuropsychological evaluation. The issue in this case was whether he had sustained a "serious neurological injury" and specifically whether that was associated with any permanent cognitive impairment.

Review of acute-care medical records did not suggest any clear loss of consciousness, and head CT scan on the day of injury was unremarkable. Review of collegiate academic records revealed that Mr. Smith's last complete semester GPA (grade point average) just prior to the accident was 1.14 (cumulative: 0.95) and that this actually improved to 2.66 (cumulative: 1.38) when he resumed his studies, about 1 year after the accident. During the interview, Mr. Smith described a fairly benign premorbid history, with no endorsement of any prior neurological, psychiatric, or sub-

stance abuse problems. He reported less than 1 hour of posttraumatic amnesia; yet, he complained of persistent difficulties with the learning and retention of new information, some neck and back pain, and frustration with his residual symptoms—all of which he attributed to the accident in question. At the same time, he reported that he was independent with all activities of daily living, including part-time labor as well as riding his bicycle in traffic.

Mr. Smith was then given a battery of neuropsychological tests. Table 1.1 presents the most significant ones of these, defined as those that were specifically referenced in my original report and/or the review by a psychologist retained by the plaintiff. My interpretation of Mr. Smith's obtained scores was as follows:

> I have concerns about the validity of these test results, for a variety of reasons. First of all, Mr. Smith clearly violates criteria for sufficient effort on a forced-choice measure (WMT [Word Memory Test]). On other tasks, assessing skills as diverse as fine motor coordination (Grooved Pegboard) and sustained attention (CPT-II [Continuous Performance Test—Second Edition]), his level of performance is so poor (more than 2 standard deviations below the mean) that it is out of proportion with the mild severity of his head injury. On other tasks, there are atypical responses. For example, on the WCST [Wisconsin Card Sorting Test], Mr. Smith made a high number of nonperseverative errors, sometimes even giving an "Other" response when the stimulus card matched one of the key cards in all three possible attributes. This is extremely unusual. For these reasons, I do not believe that these test results reflect consistent effort, and I doubt strongly that they represent a valid picture of this man's true cognitive abilities.

Note that I did not belabor the individual tests too much, to minimize the potential risk of "coaching" prior to later evaluations with this particular person or other individuals. This is a risk that needs to be considered in the context of IME's (Youngjohn, 1995). In the final "Impression and Recommendations" section of my report, I subsequently wrote:

> I can find no evidence for cognitive deficits that can unequivocally be attributed to head trauma with this man. In fact, I strongly suspect that the current test findings are confounded by inconsistent effort and possible symptom magnification. At the same time, he is telling me that he is having no difficulties in his current job, that he was obtaining B's and C's in his most recent semester at college, and that he is not depressed, so I really have no additional recommendations for his care.

This report was subsequently sent to the attorney who had retained me, who then had a legal obligation to share it with plaintiff's counsel. About 4 weeks

TABLE 1.1. Neuropsychological Test Scores

Test name	Test result
Conners' CPT-II omissions[a]	*T* 100
Conners' CPT-II commissions[a]	*T* = 66
Conners' CPT-II reaction time[a]	*T* = 44
Conners' CPT-II variability[a]	*T* = 89
CVLT-2 trial A1[b]	*z* = –1.5
CVLT-2 trial A5[b]	*z* = –1.5
CVLT-2 Short Delay Free Recall[b]	*z* = –1.5
CVLT-2 Long Delay Free Recall[b]	*z* = –2.5
CVLT-2 Recognition Hits[b]	*z* = 0.5
CVLT-2 Recognition False Positives[a]	*z* = 4
Grooved Pegboard, right hand[b]	*T* = 28
Grooved Pegboard, left hand[b]	*T* = 20
Trail Making Test, A[b]	*T* = 38
Trail Making Test, B[b]	*T* = 37
WAIS-III Verbal Comprehension[b]	SS = 105
WAIS-III Perceptual Organization[b]	SS = 118
WAIS-III Working Memory[b]	SS = 104
WAIS-III Processing Speed[b]	SS = 84
WCST Perseverative Errors[b]	*T* = 41
WCST Nonperseverative Errors[b]	*T* = 36
WMT Immediate Recall[b]	% correct = 72.50
WMT Delayed Recall[b]	% correct = 87.50
WMT Consistency[b]	% correct = 70.00

Note. CPT-II = Continuous Performance Test—Second Edition; CVLT-2, California Verbal Learning Test–2; WAIS-III, Wechsler Adult Intelligence Scale–III; WCST, Wisconsin Card Sorting Test; WMT, Green's Word Memory Test; *T*, standardized score with mean = 50 and standard deviation = 10; *z*, standardized score with mean = 0 and standard deviation = 1; SS, standardized score with mean = 100 and standard deviation = 15.

[a]Higher scores reflect worse performance.

[b]Higher scores reflect better performance.

later, I received a written request from "consulting psychologist" Dr. Jones for a copy of the report of my neuropsychological evaluation of Mr. Smith, along with the raw test data. Apparently, Dr. Jones had been asked by Mr. Smith's attending physician to perform a neuropsychological evaluation but then found out that one had recently been completed by me. Dr. Jones sent with his request a release of information that was signed by Mr. Smith. However, because Mr. Smith was not the client in this medical–legal context, I felt that it was my responsibility to contact the attorney who had retained me in the first place. This attorney then gave me permission to forward my report and test data to Dr. Jones, which is what I subsequently did.

About 3 weeks later, Dr. Jones prepared a letter to Mr. Smith's attending physician, documenting that he had obtained the results from my evaluation. This letter was forwarded to me by the defense attorney about 2 weeks after that. In it, Dr. Jones stated the following:

> **Predictably, Dr. Donders questioned Mr. Smith's level of effort and motivation** in taking the tests, and determined that the test scores did not reflect his true cognitive status (**1**). It is my professional opinion that the test scores do reflect ongoing cognitive problems, very consistent with those reported by Mr. Smith and his father. Thus, I will offer my own interpretation of the test scores from Dr. Donders's evaluation for you and make some recommendations for treatment planning.
>
> Dr. Donders stated that Mr. Smith's test scores were not likely valid due to some of the scores being quite low. The low scores on the evaluation were in areas of processing speed, attention and concentration, and verbal memory. As you know, these are **typically the areas that receive low neuropsychological test scores for individuals who have mild traumatic brain injuries** (**2**).
>
> Mr. Smith seemed to perform somewhat better on attention span measures on the WAIS-III [Wechsler Adult Intelligence Scale–III] than on other areas of the neuropsychological testing. He had a very low attention span score on the CPT, a more sensitive indicator of the patient's ability to maintain attention on a task over time. Mr. Smith had mildly impaired scores on the Trail Making Test, something that would not likely be seen in an individual of his age and health were there not some other interfering cognitive problems. **He seems to have slowed speed of processing** (**3**)**.**
>
> The test scores with most significance and relevance for Mr. Smith's efforts to return to college are the results of the California Verbal Learning Test–2. He was only able to recall 4 of the 16 words on the first trial, and by the fifth trial had only been able to learn 9 of the 16 words. His short-term delayed recall was only 6 words, though cuing did help him retain all of the 9 words that he had originally learned from the 16-word list. **His delayed recall of the list was only 5 words. Recognition memory suggests that there had been passive storage of information and also provided a nice indicator of good level of effort and valid test results** (**4**)**.**

On the basis of his interpretation of my test results, Dr. Jones also offered a number of recommendations for the care of Mr. Smith. These included the following:

> Mr. Smith might **benefit from a psychostimulant medication** because of his attention span difficulties (**5**)**.** Because he takes evening classes, the dosing and timing of stimulant medication must be carefully considered. In the academic environment, it is advisable for Mr. Smith to take a somewhat reduced number of courses because of the limitations in his memory. He should be instructed on how to use an audio tape recorder in class to assist with note taking. He should probably be **treated as a learning disabled student in the community college environment** (**6**)**.** This will allow him access to help with note taking, extra time for taking tests, and the ability to take tests in a distraction-free environment.

Analysis

(**1**) Dr. Jones used the term *predictably* to refer to my interpretation of Mr. Smith's effort and motivation. I could not determine the grounds for this assertion although it is possible that Dr. Jones had seen previous reports that were authored by me and that included comments on the validity of test taking by the examinee. It is important to appreciate that I routinely administer symptom validity tests to all my patients, regardless of whether they are children or adults, and regardless of whether they are referred on a routine clinical basis or for an IME. However, I elected not to react to Dr. Jones's somewhat dismissive tone and simply focused instead on the facts of the case.

(**2**) The assertion that processing speed and other cognitive functions are typically "low" for persons with "mild traumatic brain injuries" is not consistent with the literature on this subject. It is true that Mr. Smith's lowest factor index score on the WAIS-III was Processing Speed. However, that index is typically depressed only by moderate to severe TBI (i.e., with prolonged coma and/or acute intracranial lesions on neuroimaging). Patients with mild TBI tend to obtain levels of performance on this index that are not different from demographically matched controls, as long those patients are not seeking financial compensation and have no forced-choice indicators of possible poor effort (Donders, Tulsky, & Zhu, 2001).

(**3**) The blanket statement that Mr. Smith had "slowed speed of processing" ignores the fact that his reaction time on Conners's CPT-II was well within normal limits—if anything, about a half a standard deviation better than average. Dr. Jones did not discuss the discrepancy between that index of speed of processing and other ones in the battery. It is well known that inconsistencies in test results occur more frequently in persons who may not give consistent effort (Larrabee, 2005; Slick, Sherman, & Iverson, 1999).

(**4**) Dr. Jones refers exclusively to the California Verbal Learning Test—2 (CVLT-2) in his discussion of memory impairment. Although it is true that Mr. Smith obtained 16/16 correct on the forced-choice recognition trial of the CVLT-2, this does not negate the fact that he violated relevant validity criteria on Green's WMT, which has been validated more extensively for the assessment of effort and motivation during neuropsychological evaluations. Furthermore, Dr. Jones does not appear to appreciate that a level of impairment of 2.5 standard deviations below the mean on the long delay free recall trial of the CVLT-2 is considerably worse than one would expect on the basis of a fairly mild head injury (with minimal loss of consciousness or posttraumatic amnesia, and a negative head CT scan). In addition, Dr. Jones does not comment on the fact that Mr. Smith had no less than 13 false positives on the Yes/No recognition memory trial of the CVLT-2, which is an even more extreme level of impairment (4 standard

deviations from the normative mean). Such a level of impairment would be unusual, even in persons with moderate–severe TBI (Donders & Nienhuis, 2007).

(5) *Psychostimulant medication* can be a reasonable consideration when a person truly has difficulties with attention. However, Dr. Jones appeared to make this recommendation exclusively on the basis of Mr. Smith's psychometric test scores. Even if Mr. Smith had not violated validity criteria on the WMT, it should still have been apparent that performance on the CPT that was literally worse than 99% of Mr. Smith's peers was hard to reconcile with the facts that at the time of the neuropsychological evaluation, this man was competitively employed.

(6) Finally, a diagnosis of being "learning disabled" requires (at least in the state of Michigan) a significant discrepancy between overall intelligence and academic achievement. No achievement tests were administered during the neuropsychological evaluation, primarily because Mr. Smith's GPA was actually better during the first semester when he returned to college after the accident than it had been before that same accident. Dr. Jones did not appear to appreciate this.

Initial Resolution

Shortly after receiving and forwarding to me Dr. Jones's letter to Mr. Smith's attending physician, the attorney who had retained me initiated a telephone conference with me, during which I reviewed verbally my above-described reactions to Dr. Jones's interpretations of my test findings. I was then asked to summarize the most convincing points in a letter that could be submitted into evidence during a scheduled deposition of Dr. Jones because the attorney was concerned that too much detail about psychometric issues would be potentially confusing or boring to the jury. I was specifically asked to support any of my positions with literature references. In response to this request, I prepared the following rebuttal to Dr. Jones's narrative review:

> I have reviewed the letter by Dr. Jones that you sent me. Dr. Jones apparently disagrees with my assessment findings. To tell you the truth, I find his rationale somewhat difficult to follow, for the following reasons.
>
> A. Dr. Jones does not seem to appreciate that this man violated empirically established and cross-validated measures of effort and motivation. The best example is Mr. Smith's failure to meet such criteria on the WMT, a forced-choice measure of response validity during neuropsychological evaluations. His scores are worse than those of adults with severe brain injury, and even grade-school children would have done better (Green & Flaro, 2003). The validity of the WMT in the assessment of patients with traumatic brain injury has been well es-

tablished in the professional literature (Green, Rohling, Lees-Haley, & Allen, 2001; Hartman, 2002).

B. As I explained in my original report, the level of impairment that Mr. Smith displayed on some of the other tests was way out of proportion with the apparently very mild severity of the head injury in question. It has been well established that significant cognitive dysfunction for more than a year after this kind of mild head injury is rare and typically related to factors other than cerebral compromise (Alexander, 1995; Binder & Rohling, 1996; Dikmen, Machamer, Winn, & Temkin, 1995). Yet, here is a man who scored worse than 99% of his peers on a measure of sustained attention (CPT), at a time point that was almost 2 years postinjury. Keep in mind that he reported that, in real life, he had no problems with riding a bicycle in traffic or performing his job duties—all things for which he would need to be able to concentrate.

In the end, Dr. Jones's documentation does not include anything that leads me to change my previously offered impressions and recommendations.

Follow-Up

About 2 months after I had written this rebuttal to the attorney who had retained me, I received a letter from that same attorney, asking for additional responses to comments that Dr. Jones had made during a deposition that had taken place in the meantime. The attorney indicated that he was surprised that Dr. Jones stated that he had never heard of the WMT, and he asked me to provide information about this test and its general acceptance in the professional community. Around the same time, I received a separate notice of the taking of my trial deposition within the next month. The following is a reproduction of the relevant portion of Dr. Jones's discovery deposition.

Q. I understand that you, at least at the time you dictated your September 13, 2004, report, didn't agree with everything that Dr. Donders said, at least with regard to some of his conclusions?

A. That's correct.

Q. But with respect to the raw data itself, did you have any concerns or disagreements with regard to the tests that were administered, the manner in which they were administered, or the manner in which they were scored?

A. I don't know the manner in which they were administered or scored, because I only have the scores themselves. I do know Dr. Donders has an assistant to do the testing but I am assuming that's

all in a very appropriate order and done well, and I would not normally question that. There's a test that he used that he relies heavily upon that I've never heard of, and I don't know of any other neuropsychologist who's heard of it either, because I've been asking. It's called the Word Memory Test. He puts a great deal of weight on that, and it's Green's WMT. And I can't find anyone who knows anything about that test.

Q. That is a test that Dr. Donders relied upon, essentially, because it raised concerns in his mind concerning the validity of the test taking?

A. Yes.

Q. The effort and motivation by Mr. Smith, correct?

A. Correct.

Q. And that's not a test you've administered yourself, correct?

A. No.

Q. And who did you check with?

A. Dr. [name redacted], Dr. [name redacted].

Q. Can you think of any other neuropsychologists or any other health care providers you spoke to questioning the WMT?

A. No. Just those two.

Q. What it means—OK—Have you done . . . ?

A. I looked it up in a book of neuropsychology tests and couldn't find it.

Q. So, I guess, aside from the fact that you couldn't find it, you don't have any opinions concerning the validity or the usefulness of the WMT since you're not familiar with it?

A. No.

I subsequently called the attorney and expressed my surprise at Dr. Jones's ignorance about the WMT. I explained that in 2003, the National Academy of Neuropsychology had awarded its Nelson Butters award to Rohling, Green, Allen, and Iverson (2002) as the most highly rated peer-reviewed article that had been published in the *Archives of Clinical Neuropsychology*, the official journal of that organization. I emphasized that this was a paper that relied heavily on the WMT as a measure of effort and motivation to determine the validity of effort during neuropsychological evaluations.

I also faxed to the attorney a list of papers of which I was aware that had been published in peer-reviewed professional journals at least a year

before Dr. Jones wrote his September 2004 letter, and at least 2 years before his deposition, all of which included the WMT. In addition to the articles that I had already cited in my above-mentioned rebuttal, these included several papers that specifically addressed the use of the WMT in persons with TBI in the context of financial compensation seeking, such as the works of Green, Iverson, and Allen (1999), Green, Lees-Haley, and Allen (2002), and Iverson, Green, and Gervais (1999). Mr. Smith's personal injury lawsuit was subsequently settled out of court within a week after I had provided the attorney with this additional information, and my scheduled trial deposition was canceled at that time.

CONCLUSIONS

This case presentation is intended to make a couple of points. The first principle is that it is important in the context of an IME to have all the relevant records, and to use tests that have established standardization, reliability and validity. In other words, the method of application should be a sound, scientifically defensible approach (Greiffenstein & Cohen, 2005; Larrabee, 2005). Had I not been able to compare premorbid and postmorbid academic records, I would not have been able to highlight the fact that the plaintiff's GPA was actually higher afterwards. Had I not used an empirically validated test of effort like the WMT, and appropriately normed instruments like the WCST and CPT-II, I would have had more difficulty rebuking Dr. Jones's critique of my original report.

A second and related objective is to demonstrate the need to be able to support one's opinions with specific empirical references. Sound neuropsychological IME practice includes not only a standardized approach but especially also the use of tests that have been accepted in the scientific community, and a working knowledge of the related literature. Because I could cite research in a peer-reviewed journal concerning the most common findings with the WAIS-III in the evaluation of patients with various degrees of severity of TBI, I was in a better position to respond to Dr. Jones's original commentary about reduced speed of information processing than if I had used an obscure or homemade test for which there was no research background.

Third, it is advisable to present information in a way that can be understood by persons who do not have advanced graduate course work in psychometrics or related field. Although it may be theoretically interesting to other psychologists to argue the fine points of whether standard score A is statistically significantly different from standard score B, attorneys, judges, and jury members will benefit more from a clear explanation of what the data really mean with respect to daily functioning, and the degree

to which they "make sense" from a brain–behavior relationship point of view. For this reason, I contrasted Mr. Smith's performance on one of the tests with that of school-age children, and his result on another one in the context of doing worse than 99% of his own peers. In this context, I also referred specifically to the fact that (1) this plaintiff had actually been doing better in college after his accident than before, and (2) he maintained employment and was riding a bicycle in traffic despite his subjective complaints and despite his severely impaired test scores.

I never tried to ascertain what the terms of the settlement in this case were. I wanted to keep my involvement strictly professional, without a significant degree of ownership. Any attempt at ascertaining "how much did he get in the end?" would carry the risk of wanting to "win" more in a subsequent case, or in a possible future interaction with the same plaintiff psychologist. As others have suggested (Sweet & Moulthrop, 1999; Van Gorp & McMullen, 1997), it is crucial to be aware of one's own biases in IMEs. It is important to try to avoid becoming an advocate for one side rather than an expert, or to try to please the referring attorney too much instead of sticking to the facts of the case. This is also why I never agree to any arrangement where my fee is related in any way to the "success" of the party that retains me in the case in question. Without even considering the potential ethical concerns that this might raise (Binder & Thompson, 1995; Grote, 2005), it would simply introduce at least the potential perception of bias and carry with it an inherent risk of perceived lack of objectivity.

Finally, I felt throughout this process that it was important to remain professional and neutral in my formal documentation about the case in question. Even if the plaintiff's behavior is unusual or even if the plaintiff's expert takes a dismissive tone in his report, it is advisable to just stick to the facts of the case and not get into a "micturation match." When I initially read Dr. Jones's letter, critiquing my report, I had an initial reaction along the lines of "How can he not see what is so obvious in these data?" However, in the end, I decided that getting involved in a personalized reciprocal diatribe would not likely help the jury determine the facts of the case. I figured that the neuropsychological data would pretty much speak for themselves, even if the other psychologist did not see what I saw.

REFERENCES

Alexander, M. P. (1995). Mild traumatic brain injury: Pathophysiology, natural history, and clinical management. *Neurology, 45*, 1253–1260.

American Academy of Clinical Neuropsychology. (2001). Policy statement on the presence of third party observers in neuropsychological assessments. *The Clinical Neuropsychologist, 15*, 433–439.

American Psychological Association (2002). Ethical principles of psychologists and code of conduct. *American Psychologist, 57*, 1060–1073.

Axelrod, B., Barth, J., Faust, D., Fisher, J., Heilbronner, R., Larrabee, G., et al. (2000). Presence of third party observers during neuropsychological testing: Official statement of the National Academy or Neuropsychology. *Archives of Clinical Neuropsychology, 15*, 379–380.

Binder, L. M., & Rohling, M. L. (1996). Money matters: A meta-analytic review of the effects of financial incentives on recovery after closed head injury. *American Journal of Psychiatry, 153*, 7–10.

Binder, L. M., & Thompson, L. L. (1995). The ethics code and neuropsychological assessment practices. *Archives of Clinical Neuropsychology, 10*, 27–46.

Constantinou, M., Ashendorf, L., & McCaffrey, R. J. (2005). Effects of a third party observer during neuropsychological assessment: When the observer is a video camera. *Journal of Forensic Neuropsychology, 4*, 39–47.

Dikmen, S. S., Machamer, J. E., Winn, H. R., & Temkin, N. R. (1995). Neuropsychological outcome at 1–year post head injury. *Neuropsychology, 9*, 80–90.

Donders, J., & Nienhuis, J. B. (2007). Utility of CVLT-II recall discriminability indices in the evaluation of traumatic brain injury. *Journal of the International Neuropsychological Society, 13*, 354–358.

Donders, J., Tulsky, D. S., & Zhu, J. (2001). Criterion validity of new WAIS-III subtest scores after traumatic brain injury. *Journal of the International Neuropsychological Society, 7*, 892–898.

Green, P., & Flaro, L. (2003). Word Memory Test performance in children. *Child Neuropsychology, 9*, 189–207.

Green, P., Iverson, G. L., & Allen, L. M. (1999). Detecting malingering in head injury litigation with the Word Memory Test. *Brain Injury, 13*, 813–819.

Green, P., Lees-Haley, P. R., & Allen, L. M. (2002). The Word Memory Test and the validity of neuropsychological test scores. *Journal of Forensic Neuropsychology, 1*, 97–124.

Green, P., Rohling, M. L., Lees-Haley, P. R., & Allen, L. M. (2001). Effort has a greater effect on test scores than severe brain injury in compensation claimants. *Brain Injury, 15*, 1045–1060.

Greiffenstein, M. F., & Cohen, L. (2005). Neuropsychology and the law: Principles of productive attorney-neuropsychologist relations. In G. J. Larrabee (Ed.), *Forensic neuropsychology: A scientific approach* (pp. 29–91). New York: Oxford University Press.

Grote, C. (2005). Ethical practice of forensic neuropsychology. In G. J. Larrabee (Ed.), *Forensic neuropsychology: A scientific approach* (pp. 91–114). New York: Oxford University Press.

Hartman, D. E. (2002). The unexamined lie is a lie worth fibbing: Neuropsychological malingering and the Word Memory Test. *Archives of Clinical Neuropsychology, 17*, 709–714.

Iverson, G. L. (2005). Outcome from mild traumatic brain injury. *Current Opinions in Psychiatry, 18*, 301–317.

Iverson, G. L., Green, P., & Gervais, R. (1999). Using the Word Memory Test to detect biased responding in head injury litigation. *Journal of Cognitive Rehabilitation, 17*, 4–8.

Larrabee, G. J. (2005). A scientific approach to forensic neuropsychology. In G. J. Larrabee (Ed.), *Forensic neuropsychology: A scientific approach* (pp. 3–28). New York: Oxford University Press.

Lynch, J. K. (2005). Effect of a third party observer on neuropsychological test performance following closed head injury. *Journal of Forensic Neuropsychology, 4,* 17–25.

Rohling, M. L., Green, P., Allen, L. M., & Iverson, G. L. (2002). Depressive symptoms and neurocognitive test scores in patients passing symptom validity tests. *Archives of Clinical Neuropsychology, 17*, 205–222.

Schretlen, D. J., & Shapiro, A. M. (2003). A quantitative review of the effects of traumatic brain injury on cognitive functioning. *International Review of Psychiatry, 15*, 341–349.

Slick, D. J., Sherman, E. M. S., & Iverson, G. L. (1999). Diagnostic criteria for malingered neurocognitive dysfunction: Proposed standards for clinical practice and research. *The Clinical Neuropsychologist, 13*, 545–561.

Sweet, J. J., & Moulthrop, M. A. (1999). Self-examination questions as a means of identifying bias in adversarial assessments. *Journal of Forensic Neuropsychology, 1*, 73–88.

Van Gorp, W. G., & McMullen, W. J. (1997). Potential sources of bias in forensic neuropsychological evaluations. *The Clinical Neuropsychologist, 11*, 180–187.

Youngjohn, J. R. (1995). Confirmed attorney coaching prior to neuropsychological evaluation. *Assessment, 2*, 279–283.

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