



# Medical Expert Opinion on Causation in Civil Claims - Clinical Opinions Must Apply Legal Tests and Legal Principles to be of any Assistance to the Court

*by Giles Eyre and Dr Linda Monaci*

## **Introduction**

Cases involving traumatic brain injury (TBI) are often very difficult to assess for litigation purposes, even more so if there is a pre-existing condition which may contribute to cognitive deficits whether at the time of assessment or in the future. To do so effectively requires the medical expert as well as the lawyer to have a good understanding of the applicable legal tests and principles.

The Civil Procedure Rules 1998 (CPR) clarify requirements in relation to form and content of expert witness reports in civil claims; the overriding objective of the CPR is to deal with cases 'justly' and in line with the principle of proportionality. The CPR do not describe the legal principles and the legal tests that are the key issues in establishing compensation as knowledge of those on the part of the experts is simply assumed. It remains of fundamental importance that experts are fully aware of these principles and are able to apply them when writing their reports so that the experts' opinions are meaningful to the

lawyers and the court in determining the value of a claim and a fair settlement.

This article seeks to illustrate the importance of being aware of the legal principles and legal tests in a case arising out of a claim for damages for personal injury resulting from a TBI on a man with pre-existing multiple sclerosis (MS). It also shows the importance of lawyers including in letters of instruction proper guidance in relation to those relevant principles and legal tests.

## **Case Study:**

### **Multiple Sclerosis and Traumatic Brain Injury**

A man suffering with MS was involved in a road traffic accident when 45 years old in which he sustained orthopaedic injuries, from which he has made a good recovery, as well as a head injury with loss of consciousness. In order to illustrate the key issues in his article we will assume that he sustained a moderate brain injury (i.e. sufficiently severe to cause a degree of permanent cognitive problems).

### **Multiple Sclerosis**

MS is an inflammatory and neurodegenerative disease involving the central nervous system, typically characterised by periodic inflammations that result in demyelination and eventually axonal loss and grey matter atrophy<sup>i</sup>. Cognitive problems are common in patients with MS (43 to 70% of cases<sup>ii</sup>), typically domain-specific cognitive deficits are present rather than an overall cognitive decline. Cognitive dysfunction typically involves attention, speed of processing, working memory, verbal and visuospatial memory and executive skills<sup>iii</sup>.

### **Traumatic Brain Injury**

Traumatic Brain Injury (TBI) involves sudden acceleration / deceleration and can lead to both focal and diffused lesions, due to the effect of brain rotation. Areas particularly vulnerable to damage are the frontal and temporal lobes, which are involved in executive functioning and memory, as the soft brain accelerates inside the skull and on impact hits the body projections at the base of the skull. Brain rotation can also lead to axonal shearing, where axons can be severely damaged, which causes degeneration of the surrounding brain, commonly named 'diffuse axonal injury'<sup>iv</sup>. In TBI the brain is affected not only by primary brain injury, but also secondary injury, which can occur as a result of brain swelling, raised intracranial pressure and intracranial bleeding. A history of brain injury is a predictor of poor outcome.

Attention, memory and executive function problems are common after TBI, with executive dysfunction including impaired motivation, initiation, inhibition, emotional regulation, planning and problem-solving<sup>vi</sup>. Mood disturbances are common after acquired brain injury<sup>vii</sup>, but mood can also be altered through the effect of the organic injury or awareness of disability caused by it<sup>viii</sup>. Insight is often compromised; although others may notice changes in behaviour in individuals with a brain injury, they may fail to perceive any differences or view them as insignificant<sup>ix</sup>.

### **The Claimant**

At the time of the accident the Claimant lived a fairly independent life. He was single with no children and lived alone in a privately rented flat (2nd floor with a lift). He used a wheelchair to mobilise outdoors but was able to walk indoors for brief distances. He was able to maintain part-time employment in a clerical role with the local authority, he lived alone and he managed self-care. He had support every week with house cleaning and some house chores. He did his shopping on line and had a limited social life whereby he met a stable group of friends at the local pub or cinema every week. He had no forensic history, no previous history of mood disorders and he did not abuse alcohol or take illicit drugs.

At the time of the accident his MS had been diagnosed as Relapsing-Remitting; he had been diagnosed at age 37. This is relevant because although cognitive deficits can be detected early in the disease, they are typically present as the disease progresses and are particularly severe in patients with chronic progressive or secondary progressive MS.

At 18 months after the accident he could not be discharged home as he could no longer live independently. He was placed in a care home that specialised in adults with severe cognitive problems, although he could be re-housed in the community if he had sufficient care arrangements in place. After 8 weeks of inpatient neurorehabilitation he received 12 weeks of weekly community rehabilitation.

His safety awareness was poor and he struggled with impulse control and maintaining social relationships. He was broadly independent with his toileting needs but required assistance with most activities of daily living such as washing and dressing; he needed assistance to go out of the home due to poor safety awareness and he was unable to manage even small amounts of money. His needs for support were significant, but he could still make some improvements and become more independent in his everyday life. and become more independent in his everyday life.

### ***The legal principles involved in this case***

Based on the clinical issues involved in this case, it is relevant to consider the following legal principles or legal tests<sup>x</sup>.

### **Causation**

1). The 'Egg-Shell Skull' principle means that someone who causes injury to another person must take that other person as they are. If, therefore, the injured person has a particular vulnerability, which means that the impact of the accident or injury on them is more severe than would normally be expected, the person who causes the injury is responsible for all of the consequences. The Claimants' pre-existing condition is likely to have made him more vulnerable to the effects of an injury. While a moderate TBI is likely to cause permanent cognitive problems, arguably this is even more likely in an individual whose cognitive reserve had been diminished by the MS. Damages will not be reduced because of this increased vulnerability – the Defendant is liable for all of the consequences of the injury as they arise in this individual.

2). However, due to the nature of the Claimant's pre-existing condition, his functioning is likely to decline over time in any event. The key question therefore in any claim for damages is 'What would the Claimant's functioning have been over time had the road traffic accident not taken place? Or 'but for' the accident' what would the Claimant's functioning

have been? While the Claimant lived an independent life prior to the accident, due to his pre-existing condition it is likely that his physical and cognitive functioning would have declined over time, but it is difficult to say at what point this might have occurred. Therefore, damages will be assessed taking into account where applicable that the Claimant's post-accident condition, or parts of it, would have arisen in any event because of his pre-existing condition.

The expert must seek to clarify the difference between the situation consequent on and after the accident (and the likely future prognosis) and the situation as it would have been but for the accident, and therefore how the Claimant's life has been affected by the index event.

### **'Acceleration' and 'Exacerbation'**

The terms 'acceleration' and 'exacerbation', although not medical or legal terms of art, are sometimes used in the medico-legal field to describe the relationship between the situation since the accident when compared with the likely progression of a pre-existing condition (both temporal and qualitative differences).

3). The use of the term 'acceleration' would appear to require that the injuries, symptoms and effects that the Claimant suffered as a result of the accident are *exactly the same* as those the Claimant would have suffered in the absence of the accident, but experienced earlier (their inception is at an earlier date) due to the index event. However that is rarely the case.

4). The use of the term 'exacerbation' would appear to require that the injuries, symptoms and effects that the Claimant suffered as a result of the accident are exactly of the same type as those the Claimant would have suffered in the absence of the accident, but more severe due to the index event.

While these two terms can be helpful in appropriate, and therefore in limited, cases, the expert should be very circumspect in using them to describe the situation from a clinical point of view and should rather review the symptoms, signs and effects of the accident. General statements, such as "the symptoms were accelerated by 3 years", are rarely helpful to the lawyer seeking to assess damages. The lawyer needs to have described the development of symptoms which have been experienced post-accident together with their likely effect and consequences and a comparison of that situation with the symptoms and their effects and consequences had the accident not taken place. That may in some cases include reference to the period by which symptoms have been brought on earlier as a result of the accident. In a similar way, in relation to any 'exacerbation' of symptoms, the lawyer requires a comparison of the symptoms as they would have been in the absence of the accident and a comparison of those symptoms, and their effects and consequences following and consequent on the accident.

## **Other issues involved in settling this claim**

### **Prognosis and future risk**

Where an accident has long-term effects it is necessary to continue to compare the situation into the future as it would have been in the absence of the accident with what it will now be. Whilst to the date at which the expert reports, the 'but for' situation is established on the balance of probabilities, that is as being more likely than not, and compared with the actual situation as obtained from any clinical examination, from the claimant's account, from medical records and from any other available evidence.

When looking into the future it is necessary, as best one can, to compare the hypothetical 'but for' position with the less than certain future situation as a consequence of the accident. The balance of probabilities is no longer the test and the likelihood of both situations (the 'but for' situation and the situation consequent on the accident) should be addressed. Damages are awarded according to the level of risk and therefore it is necessary to use, so far as is possible, a range of percentage chances rather than the vagaries of language (such as a "small", or "significant", or, worse still, "not insignificant", risk).

This may require the expert to report on the future likelihood of the development of symptoms or to consider possible future risks and complications of the Claimant's condition. Again, and for the same reasons, the chance of such future risks and complications should be addressed, using so far as is possible a range of percentage chances, and the effects and consequences of each such risk and complication should be described.

### **Life Expectancy**

The Claimant's life expectancy in the situation that exists following the accident may well be relevant to the assessment of continuing future losses, such as loss of earnings, or the cost of care. It may also be important to compare this post-accident life expectancy with the life expectancy in the absence of the accident, although this is unlikely to sound in significant damages.

In contrast with prognosis and future risks and complications, life expectancy is decided 'on the balance of probabilities'. The issue to be answered is to what age, or for what period, is the claimant more likely than not to survive. This is established as a present fact, not as a future risk. Life expectancy is based on the present known facts.

### ***Applying the legal principle to this case***

The following shows an example of how the issues raised by this case should be addressed in order to provide the legal team, and the court, with the opinion necessary in order to carry out a proper assessment of damages. We recognise that on complicated issues such as in this case there could well be a significant variation in opinion from different experts instructed.

The expert starts by addressing what the situation would have been in the absence of the accident, seeking to describe how the Claimant would have been both now and into the future. The expert then describes the situation as it now is and will be, and thereby provides an opinion and description of the difference that the accident (and TBI) has made.

### **Opinion on Causation**

#### **What would the situation have been in the absence of the TBI given the Claimant's pre-existing MS?**

1. At the time of the accident the Claimant had relapsing-remitting MS (he had been diagnosed 8 years earlier at age 37). While relapsing-remitting MS is associated with periods of relapse followed by recovery, typically over time the disease deteriorates into secondary progressive MS.

2. The Claimant had not received immunomodulatory drugs and therefore his condition was highly likely (90% chance) to change into secondary progressive MS within 20-25 years from onset<sup>xi</sup>. Most commonly the transition from relapsing-remitting to secondary progressive took place after 21 years<sup>xii</sup> (some variability was present in their sample, ranging from 1 year to more than 50 years).

3. Therefore the Claimant was highly likely (90% chance) to develop secondary progressive MS some 12 to 17 years after the date of the accident (at age 57 to 62). Once a secondary progressive course has been established, MS starts to deteriorate steadily and individuals typically experience a slow and unremitting deterioration in their functioning.

#### **Physical functioning**

4. MS is well known to cause physical symptoms and disability, including decline/loss of mobility, pain, fatigue, spasticity, dysarthria (difficulty with uttering speech and incontinence) and dysphagia (difficulty with swallowing). The assessment of these symptoms is the province of Neurologists with a specialism in MS.

#### **Cognitive functioning**

5. Although MS has for a long time being considered predominantly a condition that caused physical disability, the cognitive problems associated with MS have become the focus of research within the last 20 years<sup>xiii</sup>. Studies report that cognitive impairment is common in MS. While cognitive problems in MS are a major factor in unemployment, impairment of everyday functioning and social problems<sup>xv</sup>, it is not possible to accurately assess how these would impact on everyday life functioning because of the several variables at play, including pre-morbid personality, social and practical support available, and the presence of co-morbid psychiatric disorders.

### **Emotional / Neuropsychiatric problems**

6. Research has also found that the association between cognitive test scores and burden of disease was higher than between measures of physical disability and disease burden<sup>xvi</sup>. Individuals affected by MS not only experience cognitive problems and the well-known physical disability, but also emotional and neuropsychiatric symptoms, such as depression (clinical or subclinical depression may be present in up to 50% of MS patients and in 20-25% depression becomes so marked that it requires treatment by a specialist), bipolar disorder (relatively rare but more common in MS than in the general population) and euphoria (after a long disease duration usually coupled with marked physical and cognitive deficits)<sup>xvii</sup>.

#### **What impact would these problems have had on the Claimant's everyday life?**

##### **Employment**

7. Severity of cognitive problems varies and there is no general consensus as to what is an acceptable measure of cognitive impairment (vs. a mere dysfunction). Employment can be regarded as an objective measure of cognitive abilities and independent functioning (cognitive functioning and fatigue levels mediate the relationship between physical disability and employment status<sup>xviii</sup>).

8. The likelihood of employment differed depending on the type of MS<sup>xix</sup>; individuals with relapsing-remitting had the highest employment rate vs. those with secondary progressive MS. In the overall sample, 66.1% of individuals with relapsing-remitting MS were employed either part-time or full time, but only 24.3% of the individual with secondary progressive. Based on this research, once he had developed secondary progressive MS, the Claimant would have been unlikely (say 75% probability) to continue in employment<sup>xx</sup>. Therefore, 20-25 years after the initial diagnosis of relapsing-remitting MS (at age 57 to 62), with the onset of secondary progressive MS the Claimant would have entered a period when he would have had only about a 25% chance of remaining in employment.

##### **Care needs**

9. As MS developed he would have been likely to have increased care needs. The assessment of this will require the input of a Neurologist with a specialism in MS and a suitable care expert.

##### **Social functioning (and intimacy)/hobbies/activities**

10. There is variability in how cognitive problems associated with secondary progressive MS impact on the ability to work, as individuals have different pre-morbid abilities and different jobs involve variable cognitive involvement. Secondary progressive MS also impacts on physical abilities. In this particu-

lar case, the Claimant had ‘average’ intellectual abilities pre-morbidly and probably at about the time he was no longer able to work due to secondary progressive MS, he would not have been able to drive his vehicle (even with adaptations).

11. The Claimant, who is not married and does not have children, was at high risk for social isolation due to the MS and as a consequence of the physical, cognitive problems and emotional problems due to MS, he would have been likely to struggle with continuing to enjoy leisure time and meet his friends after he developed secondary progressive MS. MS also interferes with sexual functioning (after an average of 15 years from diagnosis the most common sexual problems in men was a loss of libido, prevalence of 70.4%<sup>xxi</sup>).

### **Quality of life**

12. MS affects quality of life and in particular physical, cognitive and emotional symptoms all contribute to an individual’s clinical situation. Although there is an absence of data on this aspect, based on my experience and expertise had the Claimant not sustained the TBI, his quality of life would have been significantly reduced by MS at some point which I would estimate as being some 5-10 years from secondary progressive diagnosis, that is about age 62 to 72.

### **Present Situation**

13. As set out above, at 18 months after the accident the Claimant could not be discharged home as he could no longer live independently. He resides in a care home that specialises in adults with severe cognitive problems, although he could be re-housed in the community if he had sufficient care arrangements in place. He is no longer in employment.

14. The Claimant’s safety awareness is poor and he struggles with impulse control and maintaining social relationships. He is broadly independent with his toileting needs but requires assistance with most activities of daily living such as washing and dressing; he needs assistance to go out of the home due to poor safety awareness and he is unable to manage even small amounts of money. His needs for support are significant. There is likely to be some slight further improvement in his cognitive state up to about 24 months post-accident, but the overall picture and need for support is unlikely significantly to change.

### **What difference has the accident/TBI made?**

#### **From accident to age 57 to 62**

15. The difference between his situation prior to the accident and now is entirely attributable to the consequences of the accident and the TBI. His cognitive state was almost certain to have remained the same during this period but for the TBI, and was most likely (say 75% probability) to have continued the same until 20 to 25 years of the initial diagnosis of

MS (that is at age 57 to 62). Therefore the difference between the Claimant’s situation as it would have been in the absence of the accident, that is effectively as it was prior to the accident, and how it will now be is entirely attributable to the consequences of the accident and the TBI.

#### **Post age 57 to 62**

16. Following the development of secondary progressive MS (age 57 to 62) the difference between the Claimant’s cognitive state without and with the TBI will diminish. It is not appropriate to simplify this development by describing it as “acceleration” of inevitable symptoms of MS by a number of years as the development and onset of the symptoms is likely to be more gradual and to involve fewer areas of cognitive deficit than has been the case following the TBI.

17. He would have been likely in any event to have experienced disruption to his everyday functioning to an extent that he would have been unlikely to continue to be able to work and would at some point not be able to continue to drive.

18. Although it is not possible to exactly quantify this, it is likely that the Claimant’s cognitive and physical problems would have made him at risk of social isolation and neuropsychiatric disorders, to a much higher extent than the general population. It is impossible to state at what stage from a cognitive viewpoint he would have required residential care or substantial or 24 hour home care but his care needs from a cognitive viewpoint would significantly have increased.

#### **In old age**

19. As the Claimant was already affected by MS, were he to develop dementia, his cognitive and everyday functioning would have been affected sooner than had this not been the case (due to a reduced cognitive reserve). As the Claimant also sustained a moderate TBI, his cognitive reserve has been lowered further. Over time as the MS progresses, his functioning is likely to decline more rapidly than had he not sustained the moderate TBI.

#### **Future risks as a result of the TBI**

20. There will be an increased risk of epilepsy as a result of the moderate brain injury, this increase reducing with time. This is a matter to be addressed by a neurologist or other appropriate expert with appropriate specialisation.

21. There may also be an increased risk of mortality (reduced life expectancy) as a result of epilepsy and/or the combined effects of the MS and TBI (including reduced mobility) and again the existence of such risk and the attribution of it to the effects of the TBI are matters to be addressed by a neurologist or other appropriate expert with appropriate specialisation.

## Summary

It is as important for clinical experts to be aware of the applicable legal principles in their medico-legal practice and to apply them in providing opinion as it is for the lawyers in their instructions to experts and in seeking to assess damages. Whether dealing with a complicated and involved case, such as this example, or a straightforward minor injury, the same process should be followed in every medico-legal report. A failure to do so will result in a sub-standard report and an inaccurate valuation of the claim.

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Dr Linda Monaci provides a nationwide specialised and comprehensive neuropsychology assessment and treatment service for individuals (aged 16 years and over), insurers, solicitors and other agencies.

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