

# Does trauma trigger multiple sclerosis? 2: A medicolegal view

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**Set against the scientific debate in multiple sclerosis are a number of medicolegal cases in which the scientific evidence has been examined in the context of specific events. It is instructive to understand something of the legal approach to cause and association, and to consider this in relation to individual cases.**

A claimant will only be compensated for an injury that can be shown to have been caused by the act or omission of the defendant. In order to succeed in their personal injury cases claimants must show that:

1. The defendant has been negligent or in breach of statute or regulations either by act or omission
2. That the defendant's act or omission actually caused injury
3. That it was foreseeable that the act would cause injury of some nature.

The standard of proof used in personal injury cases is the well-known phrase 'balance of probability'.

The role of the medicolegal expert is generally to present evidence as to what, if any injury, was caused by the accident on balance of probability. The meaning of this phrase is key to the understanding of the judicial decisions in such cases. It means, in the words of Lord Rodger, the judge considering the case of a multiple sclerosis (MS) patient [Dingley v The Chief Constable, 1998]:

**'that a fact is proved if a court holds that it is more probable than not, even if it is only marginally more probable. By contrast, scientific experts will require a much higher standard before they find that something is established.'**

## THE LEGAL APPROACH TO CASES OF MS ONSET OR EXACERBATION FOLLOWING TRAUMA

Where the law has considered whether there is a link between trauma and MS it has invariably been in cases of personal injury. The courts consider the scientific evidence from a variety of

different experts. The factors that the courts have considered important are as follows:

1. The temporal proximity between development of MS symptoms and the trauma itself
2. The location of the trauma: to be a possible trigger, this should involve the brain or the spinal cord.

When considering the decisions made in legal cases dealing with trauma and MS it must be borne in mind that a judge, frequently with no medical training, would decide whether a link had been caused on balance of probability between the trauma and the development of MS. He/she decides this from the various experts who present evidence, not from an exhaustive trawl through the literature dealing with the matter. The link between MS and trauma has been examined by the House of Lords, the High Court of Ireland, the Appeal Supreme Court of Ireland, and the Court of Session of Scotland.

## SPECIFIC CASES

The seven primary cases that have been heard on the relationship between trauma and MS have involved physical but not psychological trauma, and are briefly addressed below. Three of these cases have previously been reviewed in the medical literature (Mumford, 2002).

### O'Leary v Cork Corporation [1993]

On 22 July 1985 a 21-year-old male was struck in the back while working. He reported neck pain and pain in the right arm. By April 1986 he developed other symptoms and in June 1986 was diagnosed with MS. It was accepted by the neurological experts that if the first symptoms were only manifesting themselves 9 months after the accident then there could be no connection

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between the incident and the development of MS. The judge found that a link between trauma and MS was possible but 'improbable'. He found that the characteristics of MS were not manifest until after 9 months post accident. Accordingly the claimant had not discharged the onus of proof. The judgment was appealed but was dismissed.

**Bryce v British Railways Board [1996]**

In this case the claimant struck his head on a machine in November 1989. He developed a headache. Two days later he suffered a seizure and was found to have a skull fracture. It was accepted that before the accident the claimant had shown symptoms indicative of MS. He suffered marked deterioration after the accident and the question arose as to whether the trauma had exacerbated the MS. Evidence was presented that indicated that the claimant's deterioration was in line with what could have been expected for the 'pre incident' MS even if the accident had not occurred. The judge found that trauma was theoretically at least a possible cause of a deterioration in MS but that it had not been shown in this case, on balance of probability.

**Dingley v The Chief Constable of Strathclyde [1998, 2000]**

Police Constable Dingley was injured in a road traffic accident on April 11 1990. He complained of a sore head, neck and shoulders and developed symptoms which were said to be characteristic of the onset of MS. He had no symptoms before the accident. The judge regarded his task not as one of deciding if there was a link between trauma and MS as a scientific truth, but only to decide if the link was made on the evidence in this particular case. It was his opinion that the evidence indicated that the trauma could disrupt the blood-brain barrier and he was satisfied that the claimant began to show symptoms within a very short space of time after the accident. The case was appealed.

In the Court of Appeal the judges expressed doubts on the studies put forward by the claimants' experts in support of their claim. They did not find the case was proved on the balance of probabilities. The decision was upheld by the House of Lords [Dingley v The Chief Constable, 2000] who stated:

**'there is a body of clinical evidence that shows that there are many cases of symptomatic MS which cannot be related to trauma. In a small number of**

**cases the onset of symptoms is preceded by trauma. That happened in this case, but coincidences can occur...the appellant's case depends upon there being an acceptable theory to explain what it is that overcomes the blood-brain barrier and permits the development of symptomatic MS...the evidence does not go far enough to provide that explanation, and so the appellant's case fails on a balance of probabilities.'**

**Nixon and FJ Morris Contracting Ltd [2000]**

The claimant was injured when a lamp fell onto his car in May 1992. Initially he did not consider that medical attention was necessary but felt dizzy and unsteady. He was diagnosed as suffering from MS in September 1994. The judge took the view that the trauma could cause MS in some cases. All the expert witnesses agreed that for trauma to be a possible trigger, the brain or spinal cord must be involved. This case was significant as it suggested that the theoretical link between trauma and MS could be accepted by a court.

**Perry v The Post Office [2001]**

The claimant, a post woman, suffered injury when she tripped over a postbag as she passed through a door on March 18 1993. She suffered backache and degenerative changes in the back were diagnosed by magnetic resonance imaging (MRI) scan. MS was diagnosed in November 1994. A joint report in the case accepted that the majority view in the neurological profession was that trauma did not cause MS. The judge said that:

**'A temporal coincidence without more is insufficient to provide proof on the balance of probabilities'.**

The claimant in this case had made no complaint of neck pain at the time of the incident and this did not satisfy the judge that the claimant had suffered from the type of injury that could cause MS.

There have only been two widely reported cases in which the claimant has been successful:

**Kennedy v The London Fire and Civil Defence Authority [1997]**

The claimant in this accident suffered multiple injuries including a strain to his cervical spine. With hindsight it was said the claimant suffered a pattern of symptoms which started 5 weeks after the trauma. He later suffered with MS although the possibility of a diagnosis

was not raised until some 7 years post accident. The evidence given was that trauma can breach the blood–brain barrier but that it must be appropriate trauma and the symptoms should occur within 3 months of the breakdown. In this case it was found that the trauma could and had caused MS. Important evidence included the MRI scans which indicated that the demyelination had taken place at the level implicated given the site of injury and onset of disease.

### Curran v Finn [1998, 1999]

In this case the claimant slipped and fell in a grocer's shop suffering a back injury. It transpired that she had a prolapsed thoracic disc. It was common ground that MS had been developing in the claimant for almost a year before the accident. The question in this case was that of exacerbation or aggravation. The judge agreed that it was possible in an isolated case to prove that trauma could aggravate MS although acknowledged that it was not yet established as a general proposition. However, he did not find for the claimant. The case was appealed and a retrial ordered. At the new trial far more detailed evidence was given regarding the injuries and progression of the disease. The court took the view that in this case the MS had been aggravated by the fall, but surgery had also affected the progression of symptoms.

### CONCLUSIONS

It is the authors' view that the case law reflects rather more about the standard of evidence, the judges and the standard of proof in litigation than it does about the scientific relationship between trauma and MS, which was discussed in the previous article (Weatherby and Hawkins, 2003).

The successful cases of Curran and Kennedy were decided on their individual merits. Notwithstanding this, they show the willingness of the courts to accept in principle that trauma

can cause a breakdown in the blood–brain barrier. However, it appears to be the case that in the higher courts such as the House of Lords, the law lords have been less willing to accept a link between trauma and MS. It is only when more is known about the mechanisms that lead to MS that it is likely the courts will be able to take a consistent approach. **HM**

*Conflict of interest: none.*

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### KEY POINTS

- In order to succeed in their personal injury cases claimants must show that the defendant has been negligent or in breach of statute or regulations either by act or omission, that the defendant's act or omission actually caused injury and that it was foreseeable that the act would cause injury of some nature.
- The standard of proof required by a court is based on the 'balance of probability'. By contrast, scientific experts require a much higher standard before they find that something is established.
- Factors that the courts have considered important are the temporal proximity between development of multiple sclerosis (MS) symptoms and the trauma itself, and the location of the trauma: to be a possible trigger, this should involve the brain or the spinal cord.
- The majority of legal cases to date have not successfully demonstrated a link between trauma and a claimant's onset/exacerbation of MS.
- The successful legal cases show the willingness of the courts to accept in principle that trauma can cause a breakdown in the blood–brain barrier. However, it also appears that the higher courts have been less willing to accept a link between trauma and MS.