STATE OF VERMONT
DEPARTMENT OF LABOR AND INDUSTRY

	)	State File No. H-11442
	)	
Catherine Rusch	)	By: Margaret A. Mangan
	)	Hearing Officer
v.	)	
	)	For: R. Tasha Wallis
Visiting Nurse Alliance of VT/NH	)	Commissioner
	)	
	)	Opinion No. 02-01WC

Hearing Held in Montpelier on July 21, 2000.
Record Closed on August 31, 2000.

APPEARENCES:

J. Christopher Callahan, Esq. for claimant.
William O'Rourke, Esq. for employer/insurer.

ISSUE:

Whether the claimant's Parkinsonism arose out of her accident of December 7, 1994.

EXHIBITS ADMITTED:

Joint Exhibit I: Medical Records.

Claimant's Exhibit 1: Transcript to deposition of Walter Koroshetz, M.D. with curriculum vitae.

FINDINGS OF FACT

1. On December 7, 1994 the claimant was returning from a work-related conference in Fairlee, Vermont. At all times relevant to this action she was an employee and the Visiting Nurses Association (VNA) her employer within the meaning of the Workers' Compensation Act. (Act).

2. While driving her Jeep south on Route 91 in freezing precipitation, the claimant encountered a section of black ice which caused her vehicle to skid, then flip several times. The Jeep came to rest upside down on its roof.

3. The claimant's first memory following the accident was of three persons removing her from the vehicle. She was taken by ambulance to the Dartmouth Hitchcock Medical Center (DHMC) Emergency Department where she complained of a hyperextension injury to her neck and pain in her neck and left shoulder. X-rays of the cervical spine,

chest and left shoulder revealed no fractures or dislocations.

4. The claimant returned to the DHMC Emergency Department on December 12, 1994 with complaints of tingling down her right arm, continued discomfort in the upper region of her thoracic area and neck stiffness.

5. On December 14, 1994 Dr. Forrest Williams of the Chester Family Medicine Center examined the claimant and recommended physical therapy. Over the following week, the claimant had three visits to the Springfield Hospital Physical Therapy Department.

6. Immediately following the accident, the claimant was disabled and remained out of work for several days, returning on a limited basis, 4 to 5 hours a day, on December 19, 1994.

7. The employer's workers' compensation insurer, CIGNA, accepted payment of the claim and assumed indemnity and medical benefits.

8. The claimant transferred her physical therapy to Crown Point Physical Therapy Associates (CPPTA). When she was seen there on January 3, 1995, the therapist noted that she reported a "great deal of discomfort in her head, neck and back. Unable to sleep. Now she is just in a great deal of discomfort."

9. On January 11, 1995, Dr. Williams found that the claimant's symptoms were actually worse, including a dull ache in her neck and in her right arm. Dr. Williams then referred her to Dr. David Muller, an orthopedic surgeon.

10. When he saw the claimant on January 17, 1995, Dr. Muller described her pain as constant and occasionally stabbing and sharp. He diagnosed cervical spine/paraspinal muscle strain and referred her to continued physical therapy.

11. By early March of 1995 Dr. Muller diagnosed cervical myofascial pain syndrome and referred her to Dr. Daniel Wing. On March 8, 1995 Dr. Wing found that her neurologic examination was normal and her symptoms consistent with a local injury. He suspected that she had a tear in the substance of the musculotendonous junction and recommended further physical therapy.

12. On March 27, 1995 the physical therapist found that the claimant was feeling better and was encouraged. The pain had become more localized in her paraspinal muscles along C6 thorough T2 and T3. On April 3 her upper back was painful, apparently after driving four hours. She continued to treat with the CPPT until May 15, 1995 when she discharged herself to home exercises.

13. In April 1995 the claimant noticed occasional slight tremors in her left arm.

14. When she saw Dr. Wing on August 9, 1995 she told him that she had been having increasing, but intermittent, tremors in her left upper extremity. Although Dr. Wing was not concerned about the tremor, he arranged for her to follow-up with a neurologist. He found that with the exception of the tremor, she had reached medical end result with mild to moderate Category 2 DRE impairment of the cervicothoracic spine, with 3% whole person impairment. He referred her to neurologist Dr. Ayres for neurological assessment to rule out a small area of cerebellar injury from the rollover accident.

15. The claimant then sought to establish a primary care physician and began visiting Dr. Sheila Kendrick at Bellows Falls Internal Medicine practice. Dr. Kendrick questioned whether a MRI or CT of the brain had been done.

16. On September 14, 1995, the neurologist, Dr. Donald Ayres, examined the claimant. He noted that originally her tremor would "come and go" but by July and August had become more persistent and noticeable. At the time of his examination, the tremor was essentially present at all times and was confined to the left side. He found that the character of the claimant's tremor suggested "significant extrapyramidal dysfunction." He wanted to consider the possibility of tumor, secondary hydrocephalus or other etiologies following a head injury from a motor vehicle accident. He found that her symptoms did not fit well into any single category but also found that the nature of the left arm dysfunction was most typical of Parkinson's Disease, although he was hesitant to apply that diagnosis at that time. He recommended a MRI to exclude the possibility of a tumor or hydrocephalus. He also felt that the possibility of idiopathic Parkinson's Disease was to be considered.

17. On September 17, 1995 a MRI of the claimant's brain was performed at Springfield Hospital. The report of that scan indicated that the lesions revealed "would seem most likely … are secondary to trauma or from small scars or stroke from whatever etiology." The cervical spine MRI performed a week later was read as unremarkable.

18. The claimant continued with her weekly physical therapy at Crown Point Physical Therapy Associates through September and early October of 1995. She was feeling anxious and frustrated with her progress. At times her tremor was negligible, at other times uncontrollable. She was not sleeping well.

19. On October 4, 1995 the claimant began treating with Dr. Walter Koroshetz at Massachusetts General Hospital (MGH) in Boston, Massachusetts. After his examination and history, he listed several impressions of the claimant's condition: 1) prolonged musculoskeletal traumatic injury, with aching pain related to prolonged neck extension as in driving; and 2) left hemi-Parkinsonism the possible causes of which were brain injury at the time of auto accident, a traumatic contusion after the motor vehicle accident, Parkinson's Disease or tumor in the brain.

20. When the claimant returned to see Dr. Koroshetz on November 6, 1995, he found that here was a clear decomposition of movement with slowness and stiffness as she did repetitive hand taps on her lap. He then diagnosed left hemi-Parkinsonism from the auto accident. He based that impression on the change in the claimant's tremor to more of a Parkinson-like tremor than he had seen earlier. He recommended a trial of the Sinemet, a medication used to treat Parkinson's disease.

21. The claimant visited Dr. Koroshetz again on November 10, 1995, November 17, 1995 and November 29, 1995. A second MRI confirmed a lesion in the hippocampus, a structure deep in the brain.

22. When he saw the claimant on December 4, 1995 it was clear that her tremors showed no change with the Sinemet.

23. In December 1995 the claimant continued with her weekly physical therapy sessions. Overall her physical and emotional well being seemed significantly improved, although she complained of incredible discomfort in the back of her left shoulder. In early January 1996 the claimant felt that her left-sided tremors had calmed down considerably.

24. On January 17, 1996 Dr. Koroshetz noted that her tremor appeared smaller in amplitude and better. He noted that her improvement off of medications suggested that she did not have Parkinson's Disease itself, although she had what he opined was a post-traumatic Parkinson-like condition confined to one side of her body which is why he called it hemi-Parkinsonism.

25. In January and February 1996 the claimant continued her weekly physical therapy sessions. And she continued to work as a visiting nurse part-time.

26. On March 8, 1996 Dr. Koroshetz noted that the claimant's left shoulder and arm continued to be stiff and there was on and off achiness in the right upper arm. He also remarked on tingling in the left lower leg and the top of the left foot and lower 1/3 of the leg between the knee and the ankle. At that time her left arm still had a fine tremor and did not move correctly. He planned to try Clonazepam and if that did not work, he would prescribe Amantidine.

27. On March 15, 1996 Dr. Koroshetz noted that the claimant was not doing well on Amantidine. In April 1996 the claimant consulted with Dr. Michelle Moore who determined that she was suffering from fibromyalgia due to her work accident.

28. The claimant continued with physical therapy at biweekly sessions. In addition she had three acupuncture treatments with Dr. Moore.

29. At her May 15, 1996 physical therapy session, the claimant became frustrated and upset, particularly because of the tremors that she felt were getting worse and for which she had no major explanation.

30. In May 1996 the claimant obtained neuromuscular massage and further treatment with

Dr. Moore.

31. When Dr. Koroshetz saw the claimant again on June 5, 1996 he concluded that the "cause [of her tremors] is not known though symptoms date from the auto accident and there is a lesion in the hippocampus and inferior basal ganglia on the left on the MRI. Need to compare with old images."

32. On June 13, 1996 Dr. Simeon Locke performed an independent medical examination (IME) of the claimant for the insurer, CIGNA. Following his record review, medical history and examination, Dr. Locke prepared an eight-page report for CIGNA. He outlined her work history and medical history. He also reported on his review of the medical records, including the November 27, 1995 MRI report, physical therapy notes and records from treating physicians.

33. After reporting on the normal aspects of the claimant's physical examination, Dr. Locke noted that the claimant had increased tone with intermittent rigidity at both wrists, more marked on the left that on the right. Dr. Locke diagnosed left hemi-Parkinsonism and myofascial pain syndrome.

34. Dr. Locke concluded that there was a temporal relationship between the motor vehicle accident of December 7, 1994 and myofascial pain syndrome and the onset of Parkinsonism. He specifically stated, "No other etiology has been delineated." Dr. Locke noted that the claimant's history had ruled out antecedent encephalitis, exposure to toxins, use of phenothiazines, family history or any other accepted etiology of Parkinsonism.

33. On June 26, 1996 at the request of CIGNA, Dr. Locke opined that the claimant could return to her regular job as a visiting nurse, although arrangements should be made for her to do note-taking back in the office on a typewriter because taking notes by hand was difficult for her.

34. The claimant continued to treat with Dr. Moore who on September 24, 1996 wrote to the VNA with her opinion that the claimant needed a medical leave because she was not able to perform the fine motor skills necessary, nor could she drive or perform many of the physical requirements of the job. However, Dr. Moore stated the claimant could work as a part-time kindergarten aide. The claimant accepted a job as a kindergarten aide with the Chester-Andover School.

35. In September 1997 Dr. Koroshetz determined the claimant was largely unchanged form the previous year.

36. On May 6, 1998 Dr. Mona Lisa Schultz performed a neuropsychiatric evaluation of the claimant and referred the claimant to Dr. Elizabeth Moes for an assessment to determine whether the claimant had suffered a traumatic brain injury or stroke, or whether she had idiopathic Parkinson's Disease.

37. After extensive neuropsychological testing, Dr. Moes determined that the claimant's

tremor was not a resting tremor, which is typically seen in Parkinson's Disease. Nor was it an intention tremor indicating a cerebellar disorder, but rather an odd combination of the two. The findings suggested to Dr. Moes that there were multiple origins, such as small hemorrhages caused by the accident.

38. After seeing the claimant on September 28, 1998 and October 1, 1998, Dr. Schultz concluded that she could not tell whether or not the accident caused the claimant's Parkinson's-like syndrome.

39. When Dr. Koroshetz saw the claimant again on January 21, 1999, he noted that her condition had progressed to include all limbs but was still worse on the left. On March 16, 1999 Dr. Koroshetz wrote to the claimant's attorney concluding that his best hypothesis was that the disorder was triggered by the accident of December 1994. He referred to the MRI that showed 3-4 small lesions in the left hippocampus and cortex, indicating focal brain injury.

40. In a letter to this Department on June 28, 1999, Dr. Koroshetz reported that the claimant's lack of memory at the time of the accident indicated that she suffered a concussion. " Lack of memory for this period of time in the context makes the diagnosis of concussion. In actual fact, a concussion is an alteration in consciousness due to a head injury. It does not necessitate that there was an actual loss of consciousness. Many people will be 'dazed' and not fall to the ground with a concussion." In addition, Dr. Koroshetz noted that her MRI showed lesions.

41. An August 4, 1999 MRI of the claimant's brain was read as showing changes that "appear atypical for post traumatic changes, more likely they represent a benign lesion such as DNET." Dr. Koroshetz's review of that scan found no clear way of knowing if the lesions in fact represented a benign lesion such as DNET.

42. At his deposition, Dr. Koroshetz testified that the most likely cause of the claimant's Parkinson's-like symptoms was the car accident she suffered in December 1994. He opined to his absolute certainty that she suffers from Parkinsonism and to his high degree of medical certainty that the car accident was its cause.

43. In reaching his conclusion regarding causation, Dr. Koroshetz evaluated other possible causes. He performed multiple brain scans and multiple blood tests. He considered all other possible causes and has ruled them out, except for the possibility of stroke as a result of the car accident.

44. Dr. Koroshetz based his ultimate diagnosis of trauma induced Parkinsonism on an accumulation of factors and his ability to rule our others. At the suggestion that her symptoms could be emotionally induced, he responded unequivocally that a conversion disorder was not a possibility, that it was "not even close."

45. In Dr. Koroshetz's opinion, the delay in the onset of tremors is not unusual after head trauma, and, as noted above, the tremors may have been masked by pain.

46. Dr. Koroshetz reasoned that the pain claimant had in her left arm after the accident obscured her realization that she was losing function, because the pain kept her from using the arm at first. Next, he noted that attempts to use drugs that are effective against Parkinson's disease were not successful in treating the claimant's symptoms.

47. Dr. Koroshetz described his causation analysis as having both a temporal and a geographical prognosis. On the temporal issue is the fact that the claimant's tremors followed the accident. That the pain she developed at the time of the accident continued in the claimant's left arm, is a fact that supports Dr. Koroshetz's finding of a geographical nexus. He relied on the facts that the claimant was fine before the accident, that she clearly had a concussion, incurred injuries to her arm and her neck and had pain that melted into the Parkinsonism. He also cited medical research demonstrating that trauma can cause Parkinsonism. Additionally, the lesions seen on the MRI could have been trauma induced. It was the totality of these factors that led Dr. Koroshetz to conclude that the claimant's car accident caused her Parkinsonism.

48. Dr. Koroschetz testified that his findings of October 18, 1995 were significant. For someone with normal, idiopathic or coincidental Parkinson's Disease its progression would have taken years. In a general, non-traumatic case, her more rapid progression of symptoms would have been very unusual.

49. The defendant consulted with Dr. Sanford Auerbach, a neurologist from the Boston University School of Medicine who has a background comparable to Dr. Koroshetz's.

50. Dr. Auerbach attaches importance to whether or not the claimant lost consciousness at the time of the accident, a factor that Dr. Koroshetz found was neither critical not important. He found that any head injury that causes a concussion, which in his opinion this accident did, would constitute trauma, which may cause Parkinsonism. With an injury to the brain, one does not need to lose consciousness to have a concussion. The key is an alteration in mental status. In this case that took the form of the claimant's complete unawareness of what happened after the impact until people approached the car. For example, she was unaware that the car had rolled over several times.

51. Additionally, Dr. Auerbach relied on the MRI report that he said provided no evidence of a traumatic brain injury. He agrees that the first MRI was suspicious of traumatic brain injury but that a subsequent one demonstrated only benign changes. However, its temporal distance from the accident limits even the first scan's persuasive force.

52. Dr. Auerbach based his opinion that the car accident did not cause the claimant's Parkinsonism on his understanding that the claimant did not lose consciousness, had no acute changes in mental status, had no neurological deficits and had a lack of anatomic evidence from the MRI. Additionally, he opined that generally severe trauma is necessary to trigger Parkinsonism. In this case, he would not speculate as to the cause of the claimant's tremors.

53. Dr. Koroshetz testified that his opinion regarding causation became stronger over the five years he has treated the claimant. Because during that time he was unable to find another

cause for her Parkinsonism, he solidified his opinion that it was caused by the accident. According to Dr. Koroshetz, before the accident the claimant would not have had the symptoms he first observed in October of 1995 without her knowing about it.

54. Dr. Koroshetz confirmed that it is difficult to prove that specific trauma caused Parkinsonism. However, in the claimant's case he found that it was the best explanation for what happened.

CONCLUSIONS OF LAW

1. The sole issue for resolution is whether the claimant's Parkinsonism is causally connected to the accident of December 7, 1994.

2. Where the causal connection between an accident and an injury is obscure, and a layperson would have no well-grounded opinion as to causation, expert medical testimony is necessary. *Lapan v. Berno's Inc*., 137 Vt. 393 (1979). There must be created in the mind of the trier of fact something more than a possibility, suspicion or surmise that the incidents complained of were the cause of the injury and the inference form the facts proved must be the more probable hypothesis. *Burton v. Holden & Martin Lumber Co*., 112 Vt. 17 (1941).

3. When evaluating and choosing between conflicting medical opinions, this Department has traditionally considered several factors: 1) whether the expert has had a treating physician relationship with the claimant; 2) the professional education and experience of the expert; 3) the evaluation performed, including whether the expert had all medical records in making the assessment; and 4) the objective bases underlying the opinion. *Yee v. IBM*, Opinion No. 38-00WC (Nov. 9, 2000); see also *Miller v. Cornwall Orchards*, Opinion No. 20-97 WC (Aug. 4, 1997).

4. Although many physicians and other health care providers have examined, treated and tested the claimant, her primary treating physician for the Parkinsonism has been neurologist Walter Koroshetz from the Massachusetts General Hospital, although he has not been her primary care physician for all other health issues. Dr. Koroshetz has treated the claimant consistently for five years. He has had all of the medical records and performed many diagnostic tests including several MRI scans and numerous blood tests. He examined her no fewer than seventeen times over the past five years. His reports are thoughtful, clear, detailed and comprehensive. They are well supported objectively with tests and analyses. He is highly qualified as an expert on the issue in this case by virtue of his education, board certification, professional standing and relevant experience. At his deposition he was subject to expert cross-examination which he met with well-supported answers about his examinations, treatment and opinions.

5. The employer obtained two expert opinions as to the claimant's condition and its causal connection to the car accident. The first was an examination by Dr. Simeon Locke on June 13, 1996. After reviewing her medical records and examining the claimant, Dr. Locke concluded that there was a relationship between the motor vehicle accident of December 7, 1994 and the claimant's myofascial pain syndrome and the onset of Parkinsonism. He went on to state that no other etiology had been delineated. Dr. Locke's single examination of the claimant was a thorough one. In response to a subsequent inquiry by the insurer, Dr. Locke stated that he believed the claimant could return to her regular job as a visiting nurse with special arrangements made for her note-taking when she returned to the office.

6. The insurer also submitted the July 11, 2000 medical review report to Dr. Sanford Auerbach who reviewed the claimant's medical records, but did not examine her.

7. Dr. Auerbach concluded that the claimant's medical records lacked evidence to conclude that she had suffered a traumatic brain injury because there was no immediate loss of consciousness. Yet that conclusion is strongly challenged by Dr. Koroshetz's conclusion that loss of consciousness is a common, but not necessary, indication of a brain injury. A change in one's level of consciousness, as evident here with the claimant's lack of memory of the car rolling over, is sufficient.

8. Dr. Auerback interpreted the MRI scan report as not demonstrating any traumatic injury. Such an interpretation stands in contrast to the interpretation of the others who interpreted that report and concluded that the changes seen may not be definitive signs of trauma, but certainly could have been caused by trauma. In any case, the timing of the first MRI –more than three months after the accident---limits the definitive value of its interpretation.

9. Dr. Auerback concludes that there is no evidence to support the diagnosis of a traumatic brain injury that caused the claimant's Parkinsonism. Such a conclusion is persuasively countered by Dr. Koroshetz who confirmed a causal nexus to the accident based on several relevant factors, including alteration in mental status immediately after the accident, the location of the claimant's pain, the onset of tremors following a traumatic event, her good health beforehand, literature confirming that Parkinsonism can follow head trauma, resistance to drugs used to treat Parkinson's Disease and lesions seen on the MRI.

10. The defendant argues correctly that "because something comes into existence after the fact, standing alone, does not justify a conclusion that it came into existence because of the fact." *Norse v. Melsur Corp*., 143 Vt. 241, 244 (1983). However, the evidence in this case is not limited to a temporal connection. When all of the factors on which Dr. Koroshetz relied are taken together, there is created in the mind of this trier of fact, more than a possibility, suspicion or surmise that the car accident caused the Parkinsonism and that such a causal connection is the most probable hypothesis. *Burton* 112 Vt. 17.

ORDER

Based on the Foregoing Findings of Fact and Conclusions of Law, I conclude that the claimant's Parkinsonism is causally related to her December 7, 1994 accident. As such, the defendant is ORDERED to pay all related workers' compensation benefits.

Dated at Montpelier, Vermont this 8th day of January 2001.

_____

R. Tasha Wallis
Commissioner

Appeal:

Within 30 days after copies of this opinion have been mailed, either party may appeal questions of fact or mixed questions of law and fact to a superior (county) court or questions of law to the Vermont Supreme Court. 21 V.S.A. §§ 670, 672.