OFFICE OF THE SPECIAL MASTERS
No. 96-437V
(Filed: June 12, 1998)

* *		
DUSTIN COLE ELLIS, a minor, by next friends and parents, ROGER ELLIS and DEBBIE ELLIS,	*	
Petitioners,	*	**TO BE PUBLISHED**
v.	*	
SECRETARY OF HEALTH AND HUMAN SERVICES,	*	
Respondent.	*	
* *		

Harvey L. Morton, Lubbock, TX, for petitioners.

Linda S. Renzi, Washington, DC, for respondent.

DECISION AND ORDER

MILLMAN, Special Master

On July 22, 1996, Roger and Debbie Ellis, on behalf of their son, Dustin Cole Ellis (hereinafter "Dustin"), filed a petition for compensation under the National Childhood Vaccine Injury Act of 1986[(1)] (hereinafter the "Vaccine Act" or the "Act"). Petitioners have satisfied the requirements for a prima facie case pursuant to 42 U.S.C. § 300aa-11(c) by showing that: (1) they have not previously collected an award or settlement of a civil action for damages arising from the vaccine injury, (2) MMR vaccine was

administered to Dustin in the United States, and (3) they have incurred $1,000.00 in unreimbursable medical expenses prior to filing the petition.

Petitioners allege an on-Table residual seizure disorder (RSD), on-Table encephalopathy, and significant aggravation. In the alternative, petitioners allege that MMR was the cause-in-fact of Dustin's encephalitis and/or nystagmus.[(2)] 42 U.S.C. §§ 300aa-11(c)(1)(C)(I) and (ii)(I) and -14(a)(II)(B), (C), and (D).[(3)] Respondent denies that Dustin had an on-Table illness or that MMR was the cause-in-fact of his injury.

The court held a hearing in this case on March 5, 1998. Testifying for petitioners were Debbie Ellis and Dr. Ray Farmer. Testifying for respondent was Dr. Russell B. Snyder.

FACTS

Dustin was born on February 22, 1993. Med. recs. at p. 13. In June 1994, Dustin saw Dr. Alan Row due to intermittent exotropia[(4)] upon awakening which lasted for fifteen minutes. Med. recs. at p. 113.

On July 28, 1994, Dustin received an MMR vaccination when he was seventeen months old. Med. recs. at p. 50. On August 17, 1994, Dustin fell and lost a tooth. Med. recs. at p. 78. He was taken to Dr. Alfred Ray Farmer. Id. A history from this visit reflects that Dustin had 102 degree temperature and his eyes were moving back and forth. Med. recs. at p. 36. The eye movement began after the fever. Id. Dr. Farmer diagnosed bilateral nystagmus and exotropia. Id.

From August 17 to 19, 1994, Dustin was in St. Mary of the Plains Hospital. Med. recs. at pp. 80, 89-90. The history given reflects that Dustin had the onset of random, multidirectional eye movements with a temperature of 102 degrees on August 14, 1994. Med. recs. at p. 90. Although the fever subsided, the opsoclonus[(5)] persisted. Id. Approximately three weeks prior to the onset of his opsoclonus, Dustin received an MMR vaccination. Id. The opsoclonus was believed to be secondary to a post-viral reaction to MMR vaccine. Id. The final diagnosis was bilateral opsoclonus and a fractured tooth. Med. recs. at p. 90.

On August 17, 1994, Dr. Paul Brown, a pediatric neurologist, saw Dustin and noted that he did not outwardly appear encephalopathic. Med. recs. at p. 80. The history given reflects that Dustin had some head nodding and torticollis[(6)] approximately one to two weeks previously. Id. Dustin was awake and irritable, yet consolable. Id. Dr. Brown surmised that Dustin's acute onset of opsoclonus might be a mild case of encephalitis which could be related to his previous immunization. Med. recs. at p. 81.

In a medical record dated August 18, 1994, Dr. Row noted that he had seen Dustin for intermittent exotropia in June 1994. Med. recs. at p. 113. At that time, Dustin's eye examination was normal. Id. Since the onset of his nystagmus, his exotropia was not evident. Id. On examination, Dr. Row diagnosed nystagmus and opsoclonus. Id. Dr. Row commented that infantile exotropia is uncommon. Med. recs. at p. 113. The few cases that he had seen had a high incidence of some latent neurologic problem. Id. He wondered if Dustin had spasmus nutans.[(7)] Id.

On August 18, 1994, Dustin had a throat culture which reflected that he had an enterovirus, probably echovirus. Med. recs. at p. 72. A feces culture also taken on August 18, 1994 produced the same result. Id.

On August 19, 1994, Dustin went to University Ophthalmology Associates where he saw Drs. Langield and S. Rabin. Med. recs. at p. 96. The medical record from this visit reflects that Dustin had a sudden

onset of nystagmus four days previously. Id. He had had a slight turning out of his right eye since birth; however, it quickly straightened out. Id.

On August 23, 1994, Dustin had an opsoclonus follow-up with Dr. Brown. Med. recs. at p. 92. The record from this visit notes that Dustin's opsoclonus had reduced. Id. He was able to fixate without opsoclonus. Id. Dr. Brown entertained the possibility of an immunization-related reaction as well as a diagnosis of spasmus nutans. Id. Dr. Brown stated that Dustin's symptoms were resolving. Med. recs. at p. 92.

On August 25, 1994, Dustin saw Dr. John J. Iacuone, a pediatrician, who noted that Dustin's opsoclonus had significantly improved over the prior forty-eight hours. Med. recs. at p. 87. He thought his condition was most likely of viral etiology, possibly interactive with Dustin's MMR. Id.

On August 31, 1994, Dustin returned to Dr. Farmer. Med. recs. at p. 61. The record from this visit reflects that his eyes were improving every day and he was doing better. Id.

On October 3, 1994, Dr. Farmer noted that Dustin had a reaction to MMR. Med. recs. at p. 50. On that same date, Judith A. Bolin, a registered nurse, filled out a Vaccine Adverse Event Reporting System (VAERS) form. Med. recs. at p. 52. The VAERS form stated that Dustin fell in August 1994 and was taken to see Dr. Farmer. Id. Dr. Farmer noted that Dustin's eyes were twitching rapidly from side to side (opsoclonus). Id. The opsoclonus was present prior to the fall. Id. He also had a fever. Med. recs. at p. 52. Dustin was then admitted to St. Mary's Hospital . Id. He did not have a seizure, rash or behavior change. Id. Mrs. Ellis stated that the CT scan, MRI, and lumbar puncture were normal. Med. recs. at p. 52. Dustin's eye twitching had decreased but still continued. Id. An EEG was not performed. Id.

On July 18, 1995, Dustin saw Dr. Peter R. Bringewald, a neuro-ophthalmologist. Med. recs. at p. 171. His impression was that Dustin had spasmus nutans. Med. recs. at p. 172. Dr. Bringewald stated that there was no evidence of opsoclonus either historically or by examination. Id. Dustin also had right intermittent exotropia on the basis of sensory deficit and questionable optic neuropathy. Id. Dr. Bringewald was not absolutely certain that this was not a residual of a viral response from Dustin's MMR. Id. He thought Dustin might very well have a congenitally optic atrophy. Med. recs. at p. 172.

On January 9, 1996, nurse Diane Foard sent a one-year follow-up to the VAERS form, stating that she had spoken to Mr. Ellis by phone. Med. recs. at pp. 54-55. While Dr. Bringewald had diagnosed nystagmus, ruling out strabismus, another specialist opined that Dustin might have spasmus nutans. Med. recs. at p. 55. Dustin was born with a lazy right eye. Id. He had corrective surgery which was only forty percent effective. Id. As a result, he had a second surgery. Id.

On September 5, 1996, Dr. David Stager, a pediatric ophthalmologist, wrote a letter stating that Dustin has a fifty percent chance of needing further muscle correction surgery for his poor vision. P. Life Care Plan (filed October 7, 1996). Although he could not predict how much Dustin's vision would improve, he was optimistic that he would see well enough to go to school, drive, and work. Id.

TESTIMONY

Mrs. Debbie Ellis testified first for petitioners. At about two months, Dustin's right eye turned out. Tr. at 5. This was diagnosed as strabismus. Id. He has had two surgeries to correct it. Tr. at 5-6. Dr. Stager told her he would need additional surgeries for nystagmus because it aggravated the strabismus. Tr. at 6.

Dustin received an MMR vaccination on July 28, 1994. Tr. at 7. He did not have any reaction or fever. Tr. at 7-8. On August 1, 1994, his head nodded to his right side, continuing to lean his head down toward his shoulder for most of the day. Tr. at 8. This movement stopped a week or two later. Tr. at 9. His parents thought he was acting funny and did not take him to a doctor. Id.

On August 14, 1994, Dustin's eyes started twitching back and forth. Tr. at 10. These episodes lasted for a few seconds. Id. On August 15, 1994, he had a 102 degree temperature. Id. His eyes were twitching constantly. Id. This continued for the entire day. Id. He did not have an upper respiratory infection, rash, or stomach ache. Tr. at 10-11, 12.

On August 16, 1994, Dustin had the same symptoms that he exhibited the previous day. Tr. at 11. The fever broke in the afternoon, but his eyes continued to twitch. Id. On August 17, 1994, Dustin tripped and broke a tooth. Tr. at 11-12. Mrs. Ellis took him to his pediatrician, Dr. Farmer, and then to the hospital where he was diagnosed with opsoclonus. Tr. at 12.

While Dustin was hospitalized from August 17 to 19, 1994, the doctors were concerned that he had a tumor. Id. However, a spinal tap, MRI, and CT scan were negative. Tr. at 13. During his first two to three days in the hospital, Dustin had dramatic eye movements. Tr. at 15. Currently, his eyes continue to twitch. Id. The twitching is worse when he is tired or sick. Id.

Dustin never received a second MMR because Dr. Farmer did not require it. Tr. at 15.

Dr. Alfred Ray Farmer, Dustin's pediatrician, testified next for petitioners. He has been a pediatrician for ten years in Lubbock, Texas. Tr. at 18. He has seen Dustin since birth. Id. In his opinion, Dustin suffered an MMR-encephalitis which caused his opsoclonus. Tr. at 74. Dustin's eye twitching and fever were the onset of his encephalitis. Tr. at 59.

Dr. Farmer stated that Dustin had strabismus or exotropia during infancy. Tr. at 19. This is a deviation of the eyes. Id. On August 17, 1994, Dustin broke a tooth and was taken to Dr. Farmer. Tr. at 20. He had a 97.8 degree temperature and random, multidirectional eye movements. Tr. at 20-21. Dr. Farmer diagnosed the eye movements as opsoclonus. Id. Opsoclonus is distinguishable from nystagmus and spasmus nutans because the latter conditions consist of horizontal or vertical, rather than random, eye movements.[(8)] Tr. at 21-22. In addition, spasmus nutans includes symptoms such as head nodding and toritcollis. Tr. at 22. Dr. Farmer stated that you can have spasmus nutans with nystagmus; however, it must be accompanied by head nodding and torticollis. Tr. at 44. These symptoms can occur sequentially rather than contemporaneously. Tr. at 45. He further noted that spasmus nutans is not associated with fever and irritability.[(9)] Tr. at 61. Dr. Farmer was initially unaware that Dustin had a history of torticollis when his eye movements began. Tr. at 23. Although having torticollis complicates the issue of whether Dustin had spasmus nutans or opsoclonus, Dr. Farmer stated that Dustin's eye examinations in the hospital were consistent with opsoclonus. Tr. at 23-24. Dr. Farmer thinks that Dustin's torticollis on August 1, 1994 was separate from his encephalitis on August 15, 1994. Tr. at 58. He believes that the MMR did not cause his torticollis. Tr. at 70.

Dr. Farmer stated that MMR is not directly associated with either opsoclonus or spasmus nutans; however, spasmus nutans has been loosely linked to viral infections. Tr. at 29. Opsoclonus is frequently associated with encephalitis which can be a complication of MMR. Tr. at 30. A mild encephalitis can be

accompanied by fever, headache, lethargy, and obtundation. Tr. at 32. In his opinion, Dustin's fever, irritability, and eye twitching were sufficient to diagnose mild encephalitis.[(10)] Tr. at 33. Dr. Farmer believes that the MMR more likely than not caused a mild encephalitis, which, in turn, caused Dustin's opsoclonus. Tr. at 31. Dr. Farmer decided not to give Dustin a second MMR because he was concerned that the encephalitic change which commonly accompanies an immune response would be aggravated. Tr. at 41.

Currently, Dustin has persistent nystagmus which Dr. Farmer believes will continue. Tr. at 34. He does not have opsoclonus.[(11)] Tr. at 43. Although there is no cure for Dustin's nystagmus, surgery will help his strabismus. Id.

Dr. Farmer referred to the 1997 Redbook which notes that fever of 103 degrees or higher develops in approximately five to fifteen percent of MMR vaccinees during the seven to fourteen days after vaccination. Tr. at 71. The fever typically lasts for one to two days. Id. Dr. Farmer could not, however, point to medical literature depicting MMR-encephalitis eighteen days out. Tr. at 71-72.

Dr. Russell D. Snyder, a pediatric neurologist, testified for respondent. His opinion is that Dustin's MMR was not related to his subsequent difficulties which were separate, unrelated events. Tr. at 77.

At three months, Dustin had strabismus and exotropia. Id. On July 28, 1994, he received his MMR vaccination. Id. On August 1, 1994, he had the onset of spasmus nutans. Tr. at 77. On August 15, 1994, he had a febrile illness from echovirus. Id. In Dr. Snyder's opinion, Dustin never had encephalitis or opsoclonus. Tr. at 77-78. The contemporaneous descriptions of his condition are not diagnostic of opsoclonus. Tr. at 78. Opsoclonus is conjugate eye movements where the eyes move in parallel and dart every which way. Tr. at 79. Opsoclonus does not become nystagmus. Tr. at 80.

The symptoms that Dustin experienced are insufficient to diagnose encephalitis. Tr. at 81. To diagnose encephalitis, one needs evidence in the spinal fluid, on MRI, or clinically. Tr. at 82. Although abnormal eye movements may indicate severe encephalitis, you would expect spinal fluid changes. Id. Opsoclonus is associated with severe encephalitis. Tr. at 83. Spasmus nutans, however, is not associated with encephalitis. Id.

The cause of spasmus nutans is unknown. Tr. at 96-97. Torticollis is the first sign of the condition. Tr. at 84. Torticollis has an onset of up to two years of age. Tr. at 85. Spasmus nutans can last as long as seven years. Id. MMR is not linked to spasmus nutans in the medical literature and Dr. Snyder doubts there is a viral relationship to MMR. Tr. at 85, 99. Spasmus nutans is not a disease of the optic nerve. Tr. at 87. Damage of the optic nerve may be caused by strabismus. Id. Dr. Snyder attributes Dustin's tripping on August 17, 1994 to his spasmus nutans which causes balance problems. Tr. at 91.

Dr. Snyder believes that the enterovirus, rather than the MMR, was the cause of Dustin's fever because it was found in his stool and throat cultures. Tr. at 92. He is not aware of anyone having encephalitis more than fourteen days after MMR vaccination. Tr. at 93.

Torticollis would be an unusual sign of encephalitis. Tr. at 95. Having torticollis four days after MMR is too soon for a causal relationship to exist. Tr. at 95-96. Dr. Snyder knows of no relationship between torticollis and MMR. Tr. at 96.

DISCUSSION

The Vaccine Act affords petitioners three distinct theories of recovery, thereby allowing causation to be proven by showing that: (1) a Table-injury occurred as a result of the vaccine, (2) a pre-existing

condition was significantly aggravated by the vaccine, or (3) the vaccine was the cause-in-fact of the injury. Petitioners have alleged each of these theories in the instant case. The court shall individually address each claim herein.

1. On-Table Injury

Under the Act, petitioners can prove causation by demonstrating that a Table-injury occurred.[(12)] If the injuries in this Table occur within the statutorily defined time period, petitioners have proven a "Table-injury," therefore, creating a rebuttable presumption of causation. To rebut this presumption, respondent must provide affirmative evidence demonstrating that a known factor unrelated was the cause-in-fact of the petitioner's condition.[(13)] In the instant case, petitioners allege that Dustin suffered two table injuries, RSD and encephalopathy. Respondent denies that Dustin had either of these injuries.

On-Table RSD

Petitioners allege that Dustin suffered an on-Table RSD. The Vaccine Act defines RSD in 42 U.S.C. § 300aa-14(b)(2):

A petitioner may be considered to have suffered

a residual seizure disorder if the petitioner did

not suffer a seizure or convulsion unaccompanied

by fever or accompanied by a fever of less than

102 degrees Fahrenheit before the first seizure

or convulsion after the administration of the

vaccine involved and if--

(A) in the case of a measles, mumps, or rubella

vaccine or any combination of such of such vaccines,

the first seizure or convulsion occurred within 15

days after administration of the vaccine and 2 or

or more seizures or convulsions occurred within 1

year after the administration of the vaccine which

were unaccompanied by fever or accompanied

by a fever of less than 102 degrees Fahrenheit . . . .[(14)]

Petitioners have not provided any evidence that Dustin had seizures. Thus, petitioners' allegation fails in

this respect.

On-Table Encephalopathy

Petitioners also allege that Dustin suffered an on-Table encephalopathy as a result of his MMR. The Vaccine Act defines encephalopathy under section 14(b)(3). Subsection (3)(A) states:

The term "encephalopathy" means any significant acquired abnormality of, or injury to, or impairment of function of the brain. Among the frequent manifestations of encephalopathy are focal and diffuse neurologic signs, increased intracranial pressure, or changes lasting at least 6 hours in level of consciousness, with or without convulsions. The neurological signs and symptoms of encephalopathy may be temporary with complete recovery, or may result in various degrees of permanent impairment. Signs and symptoms such as high pitched and unusual screaming, persistent unconsolable [sic] crying, and bulging fontanel are compatible with an encephalopathy, but in and of themselves are not conclusive evidence of encephalopathy. Encephalopathy usually can be documented by slow wave activity on an electroencephalogram.

The only illness occurring within five to fifteen days after MMR was torticollis. Torticollis is not a manifestation of encephalopathy. Thus, petitioners' allegation fails in this respect as well.

On-Table Significant Aggravation

Petitioners allege that MMR significantly aggravated Dustin's preexisting exotropia and strabismus. Under the Act, "significant aggravation" is defined as "any change for the worse in a preexisting condition which results in markedly greater disability, pain or illness accompanied by a substantial

deterioration of health." 42 U.S.C. § 300aa-33(4). To prevail with a claim of significant aggravation under the principles enunciated by the Federal Circuit in Whitecotton v. Secretary, HHS, 81 F.3d 1099 (Fed. Cir. 1996), petitioners must show that: (1) the vaccinee's current condition is worse than his pre-vaccination condition, and (2) the onset of that significant worsening occurred within Table time. Petitioners' burden, however, is slightly more expansive than the above framework as they must also show that the vaccine injury led to the current condition. Song v. Secretary, HHS, 31 Fed. Cl. 61 (Fed. Cl.), aff'd, 41 F.3d 1520 (Fed. Cir. 1994).

Petitioners have failed to provide sufficient evidence that Dustin had an illness occurring between five and fifteen days after his MMR which significantly aggravated his pre-existing conditions. The only illness Dustin had during that time period was torticollis which the court finds was the first sign of his spasmus nutans based on Dr. Snyder's testimony and Dr. Bringewald's records. Petitioners' allegation fails in this respect as well.

Causation-in-Fact Nystagmus

Petitioners allege that MMR was the cause-in-fact of Dustin's nystagmus and/or encephalitis.[(15)] To satisfy their burden of proving causation-in-fact, petitioners must offer "proof of a logical sequence of cause and effect showing that the vaccination was the reason for the injury. A reputable medical or scientific explanation must support this logical sequence of cause and effect." Grant v. Secretary, HHS, 956 F.2d 1144, 1148 (Fed. Cir. 1992); Agarwsal v. Secretary, HHS, 33 Fed. Cl. 482, 487 (1995); see also Knudsen v. Secretary, HHS, 35 F.3d 543, 548 (Fed. Cir. 1994); *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). "[E]vidence showing an absence of other causes does not meet petitioners' affirmative duty to show actual or legal causation." Grant, supra, 956 F.2d at 1149.

Petitioners have failed to meet their causation-in-fact burden. Petitioners posit that Dustin had opsoclonus when his eyes started twitching constantly. However, this diagnosis was made by Dr. Farmer who, when making the diagnosis, was unaware that Dustin had torticollis two and one-half weeks earlier. At trial, Dr. Farmer testified that spasmus nutans generally includes torticollis. Dr. Bringewald, a neuro-ophthalmogist, who was apprised of Dustin's entire history, posited that Dustin never had opsoclonus. Rather, he had spasmus nutans. This diagnosis was buttressed by the testimony of Dr. Snyder who also opined that Dustin did not have opsoclonus. In addition, Dr. Snyder testified that toricollis is the first sign of spasmus nutans.

Dr. Farmer's opinion that Dustin had encephalitis is not substantiated by Dustin's symptomatology. Both throat and stool cultures showed that Dustin had enterovirus. This is not only suggestive of a viral illness but also explains his sudden fever and irritability. For Dr. Farmer to rule out the role of the enterovirus is unpersuasive considering that fever and irritability are entirely consistent with a viral illness. Dustin's spinal fluid, MRI, and CT scan were normal and no doctor, including Dr. Farmer, contemporaneously diagnosed encephalitis. Accordingly, the court cannot find any basis to hold that Dustin had encephalitis.

Dr. Snyder, a pediatric neurologist, is far more qualified to speak of neuropathies than Dr. Farmer, a pediatrician. For Dr. Farmer to think that torticollis is unrelated to Dustin's subsequent eye twitching is not credible in light of the diagnostic entity of spasmus nutans, which includes both of these symptoms. The court finds Dr. Bringewald's opinion in the medical records and Dr. Snyder's testimony far more credible. Their opinions link Dustin's torticollis with his nystagmus, concluding that Dustin had spasmus nutans. Petitioners provided no evidence that MMR causes spasmus nutans, particularly with a four-day onset. The fever and irritability are then easily connected to the enterovirus, and independent of the spasmus nutans.

In addition, the court finds the timing of Dustin's nystagmus on August 15, 1994 to be highly suspect for a relationship to MMR. Dustin did not develop a rash or fever during the seven to fourteen days after his MMR vaccination. Yet, Dr. Farmer posits that MMR caused Dustin's fever and eye twitching eighteen days later. Short of temporal association, petitioners' proof of causation in fact lacks any basis beyond Dr. Farmer's unpersuasive testimony.

Petitioners have not satisfied their burden of proving that MMR caused in fact Dustin's nystagmus, which the court holds was part of his spasmus nutans.

CONCLUSION

This case is dismissed with prejudice. In the absence of a motion for review filed pursuant to RCFC Appendix J, the clerk of the court is directed to enter judgment in accordance herewith.

IT IS SO ORDERED.

DATE: _____ _____

Laura D. Millman

Special Master

1. [1] The statutory provisions governing the Vaccine Act are found in 42 U.S.C.A. § 300aa-1 et seq. (West 1991). The National Vaccine Injury Compensation Program comprises Part 2 of the Vaccine Act. For convenience, further reference will be to the relevant subsection of 42 U.S.C. § 300aa.

2. Nystagmus is "an involuntary, rapid, rhythmic movement of the eyeball, which may be horizontal, vertical, rotatory, or mixed...." Dorland's Illustrated Medical Dictionary, 1162 (27th ed. 1988).

3. [3] Under the change in the regulations, 42 C.F.R. §100.1-100.3, effective March 10, 1995, encephalopathy, RSD, and significant aggravation ("any sequelae") must occur within 5-15 days after MMR vaccination in order to be Table injuries. Moreover, encephalopathy as a Table injury is defined in such a way that symptomatology is more severe than under the previous qualifications and aids to interpretation. 42 C.F.R. §100.3. Petitioners filed their petition after the effective date of the regulations.

4. Exotropia is "strabismus in which there is permanent deviation of the visual axis of one eye away from that of the other...." Dorland's, supra, at 596.

5. Opsoclonus is "a condition characterized by nonrhythmic horizontal and vertical oscillations of the eyes, observed in various disorders of the brain stem or cerebellum." Id. at 1185.

6. Torticollis is "a contracted state of the cervical muscles, producing twisting of the neck and an unnatural position of the head." Id. at 1734.

7. "The clinical entity of spasmus nutans is characterized by nystagmus, head nodding, and abnormal head positioning . . . Onset typically occurs between 6 and 12 months of age. Nystagmus is characteristically binocular (but may be monocular), has a high frequency and a low amplitude, is often dysconjugate, and can be horizontal, vertical, or torsional in direction. The head is held in a tilted position and titubates in a manner that resembles nodding. Head tilt and movement may be more prominent than nystagmus, and torticollis is often the first complaint . . . The syndrome usually lasts 1 to 2 years, sometimes as long as 5, and then resolves spontaneously . . . Spasmus nutans is ordinarily a

transitory, benign disorder of unknown cause . . . Treatment is not needed."

Fenichel, G.M., Clinical Pediatric Neurology. A Signs and Symptoms Approach, 325-26 (3d ed. 1997).

8. Dr. Farmer described the eye movement in spasmus nutans and nystagmus to be similar to that of a pendulum. Tr. at 23.

9. However, Dr. Farmer admitted that fever can cause irritability. Tr. at 69.

10. Dr. Farmer has diagnosed five or six children with encephalitis throughout his career. Tr. at 57. Most of these children had mild encephalitis. Id.

11. In Dr. Farmer's opinion, the opsoclonus was resolved by September 1994. Tr. at 46.

12. 42 U.S.C. § 300aa-14(a)(containing a Vaccine Injury Table).

13. 42 U.S.C § 13(a)(1)(B).

14. Due to a change in the regulations effective March 10, 1995, petitioners must show that the first seizure occurred between five to fifteen days after the MMR vaccination. See, supra, footnote 3 and accompanying text.

15. Dr. Farmer testified that Dustin originally had opsoclonus which resolved itself by September 1994. He stated that Dustin currently suffers from nystagmus.