

Diffusion Tensor Imaging: Early Diagnosis of Spastic Cerebral Palsy

Study shows DTI can differentiate between infants with periventricular white matter injury and those with spastic cerebral palsy, aiding early diagnosis

SANTA BARBARA , CA, UNITED STATES, November 7, 2024 /EINPresswire.com/ -- "The aim was to investigate whether infants with periventricular white matter injury with bilateral spastic cerebral palsy have unique lesions different from lesions in those without cerebral palsy and to evaluate the early diagnostic efficiency of Diffusion Tensor Imaging for differentiating infants with spastic cerebral palsy from those with periventricular white matter injury without cerebral palsy," states Dr. K.C. Chan, Ph.D., New York University School of Medicine.

What did Dr. K.C. Chan report in "Early Diagnosis of Spastic Cerebral Palsy in Infants with Periventricular White Matter Injury Using Diffusion Tensor Imaging", published in American Journal of Neuroradiology, 40:162-68?



Dr. Greg Vigna

"MR (magnetic resonance imaging) is effective in identifying periventricular white matter injury and demonstrates periventricular white matter signal abnormality and/or volume loss, enlargement of the lateral ventricles, and thinning of the corpus callosum.

Severe periventricular white matter injury develops frequently into cerebral palsy (CP).

Among infants with periventricular white matter injury with bilateral SCP (spastic cerebral palsy), 7 (35%), 6 (30%), 4 (20%), and 3 (15%) infants were classified into Gross Motor Function Classification system (GMFCS) levels I, II, III, and IV, respectively ... GMFCS level zero represented infants without motor dysfunction.

Structural integrity was more severely damaged in more widespread white matter areas in infants with periventricular white matter injury with bilateral spastic cerebral palsy than in those without cerebral palsy.



In babies with MRI evidence of mild PWMI, the prognosis of developing cerebral palsy is difficult to predict. DTI MRI can now predict outcomes, which allows for early intervention.”

Greg Vigna, MD, JD

Furthermore, injured corticospinal tracts were found only in infants with periventricular white matter injury with bilateral spastic cerebral palsy.”

Read Dr. Chan’s article:

<https://www.ajnr.org/content/ajnr/40/1/162.full.pdf>

[Dr. Greg Vigna, MD, JD](#), national birth injury attorney, Board Certified Physical Medicine and Rehabilitation, states, “This is important because, in babies with MRI evidence of mild

or moderate PWMI, the prognosis of developing cerebral palsy is difficult to predict. DTI MRI can now predict outcomes, which allows for early intervention in babies most at risk of motor impairments related to spastic cerebral palsy.”

Read Dr. Vigna’s book, [‘The Mother’s Guide to Birth Injury’](#).

Dr. Vigna is a California and Washington DC lawyer who focuses on neurological injuries caused by medical negligence. He is a Board Certified Physical Medicine and Rehabilitation specialist and a Life Care Planner. Ben Martin of the Ben Martin Law Group is a national pharmaceutical injury and birth injury lawyer in Dallas, Texas. The attorneys are product liability and medical malpractice attorneys, and they represent neurological injuries across the country.

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