

Precluding Med Mal 'Maternal Forces' Defense



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Medical malpractice cases often involve the intersection of science, medicine and law. Experts for both the plaintiff and defendant frequently testify to their opinions regarding the cause of injuries or illnesses, without citing medical or scientific literature.

Frye v. U.S., 293 F. 1013 (DC 1923) and *Parker v. Mobil Oil Corp.*, 7 N.Y.3d 434 (2006), and their progeny, allow scientific testimony as to causation to be challenged pursuant to the court's "gatekeeper" function. The court has the power to prevent unreliable scientific testimony from potentially confusing unsuspecting jurors.

Frye is generally understood to involve an assessment of whether the scientific theory at issue has been "generally accepted" in the scientific community.

Parker focuses on the basic foundational reliability of scientific evidence. *Parker* requires such evidence to pass muster with regard to both general causation and specific causation.

General causation requires reliable scientific evidence that, in general, the disease or injury at issue can be caused in the manner being claimed. Specific causation requires reliable scientific evidence that the injury in the particular case at issue was, in fact, caused in the manner claimed.

For the most part, the testimony of experts concerning causation is well within the bounds of broadly accepted medical and scientific theory. It is generally based upon the expert's professional experience, and his understanding of the medicine or science. Such testimony is properly challenged through robust cross-examination, and the testimony of opposing experts, and is not the subject of a Frye or Parker challenge. See, *Marsh v. Smyth*, 12 A.D.3d 307 (1st Dept. 2004) (Sax, concurring).

Nonetheless, the maternal forces of labor defense, often used by the defense to explain a brachial plexus injury in a newborn (often called an Erb's palsy injury¹), has recently been found to be scientifically unreliable by a number of courts in New York after a thorough exploration of all of the medical and scientific literature, and consideration of affidavits and testimony from the leading experts in the United States on this issue.

This article explores this development in the law.

Birth-Related Injury

The brachial plexus is a sheath of nerves which includes the lower four cervical nerve roots, and first thoracic nerve root (C5-T1) of the spine. The nerves run from the spinal cord, through the neck, and into the arm.

A brachial plexus injury is a stretch injury. It occurs when nerves within the brachial plexus are stretched beyond their anatomical capacity, or injury threshold.

Over 90 percent of birth-related brachial plexus injuries are temporary, and resolve completely within a fairly short period of time after birth. Permanent brachial plexus injuries vary in severity from mild injuries with very little permanent sequela, to severe injuries where there is obvious paralysis of the affected extremity. It is generally believed there is a direct relationship between the amount of "traction," or stretching on the nerve, and the degree of the injury.

Most birth-related brachial plexus injuries occur in the context of shoulder dystocia. Shoulder dystocia occurs when a baby's head is delivered, but the baby's shoulder is lodged on the mother's symphysis pubis. The symphysis pubis is a cartilaginous joint at the mother's pelvic outlet. During shoulder dystocia, the brachial plexus is extremely vulnerable to force being applied to the baby's head and neck by the delivering clinician. Because of this, even leading defense experts have written that lateral traction by the physician during shoulder dystocia should be "avoided at all costs."²

For more than 100 years it was agreed that permanent brachial plexus injuries in otherwise healthy newborns who underwent vaginal delivery, were the result of physician applied lateral traction during a shoulder dystocia. In a litigation context, up until the early 1990s, a brachial plexus injury in a newborn was generally considered to be prima facie evidence of malpractice. These cases, therefore, were frequently settled.

About 20 years ago defense experts published a hypothesis that brachial plexus injuries occurred in some cases as a result of the maternal, or natural "forces of labor."³ This phrase generally refers to both uterine contractions and maternal pushing.

As time passed, an increasing number of medical publications claimed that birth-related brachial plexus injuries were caused by the maternal forces of labor.⁴ These articles based their claims on (1) large retrospective series, wherein it was claimed that shoulder dystocia was frequently not associated with brachial plexus injuries, and therefore the injuries were not related to physician applied traction⁵ (2) a highly contested case report claiming that a baby was born with a permanent brachial plexus injury where there was no shoulder dystocia and no physician-applied traction,⁶ and (3) biomechanical computer simulation modeling.⁷

The maternal forces of labor defense became a staple of the defense in these cases. It led to many defense verdicts throughout the United States.

Plaintiff attorneys around the country tried to challenge the scientific underpinnings of the maternal forces theory. The theory was generally challenged pursuant to either *Frye* or *Daubert*.⁸ Most of these challenges, however, failed.⁹

Recent Cases in New York

Three recent cases in New York, *Muhammad v. Fitzpatrick*, 91 A.D.3d 1953 (4th Dept. 2012),¹⁰ *Nobre v. Shanahan*, 2013 WL 6638911 (Orange Co. Supreme Court Dec. 10, 2013), and *Sutryk v. Osula*, Index Number 91904 (Steuben Co. Dec. 20, 2013), as well as rulings during the trial in a fourth case, *Brandenburg v. Brown*, Index Number 12588/05, Supreme Court Otsego Co., however, may have signaled an emerging consensus among New York courts that the maternal forces theory is scientifically unreliable pursuant to New York law, and therefore subject to preclusion.¹¹ The author herein was lead counsel for the plaintiff in all four cases.

Muhammad involved a severe brachial plexus injury. It was uncontested there were avulsions to the brachial plexus at multiple levels of the spinal cord.

Muhammad was tried before Justice Timothy Walker in the Erie County Supreme Court. After the hung jury, plaintiff's counsel made an application to have the maternal forces theory precluded based upon *Frye* and *Parker*. The court granted plaintiff's motion to preclude. Justice Walker held:

[A]n examination of the literature cited by defendants reveals exactly how limited it is. Much of the literature produced by defendants and upon which they rely consist of reviews and summaries of a limited number of articles advocating the natural forces of labor hypothesis. Defendants have failed to demonstrate that the medical community has generally accepted the natural forces of labor concept in the context of the issues presented to this court.

The Appellate Division, Fourth Department, affirmed, holding that the maternal forces theory failed to satisfy either *Frye* or *Parker*. With regard to *Frye* the court held:

We agree with plaintiff that defendants... failed to rebut plaintiff's showing that their theory was not generally accepted within the relevant medical community.

With regard to *Parker* the court held:

Furthermore...the opinion of defendants' experts on causation should set forth the "exposure [of plaintiff's daughter] to a [harmful in utero event], that the [event] is capable of causing the particular [injury] (general causation) and that [plaintiff's daughter] was exposed to [a sufficiently harmful event] to cause the [injury] (specific causation)" (*Parker*, 7 N.Y.3d at 448, 824 N.Y.S.2d 584, 857 N.E.2d 1114). Even if it can be said that defendants established that plaintiff's daughter was exposed to a harmful event unrelated to their actions with respect to her birth, we conclude that the court properly determined that defendants failed to meet both the specific causation and general causation prongs of the test set forth in *Parker* and thus that the court properly refused to admit the testimony at issue.

Muhammad, which is now settled, resulted in significant discussion in the medical malpractice bar. Many practitioners, however, took the position that *Muhammad* was fact-specific and therefore challenged its precedential weight.

Indeed, thereafter, in *Munoz v. Rubino*, 37 Misc.3d 1216(A) (Supreme Court Orange Co., 2012) Judge Catherine Bartlett found that the evidence submitted did not even rise to the level of requiring a Frye hearing, and rejected the application for a Frye motion to preclude the maternal forces of labor defense. *Munoz* was thereafter tried to a defense verdict based on the maternal forces defense. Importantly, however, the plaintiff's attorney in *Munoz* did not make an application to preclude pursuant to *Parker*, and did not distinguish between permanent and temporary brachial plexus injuries.

Thereafter, in April 2013, in *Brandenburg*, a *Parker* challenge to the maternal forces theory was made by the plaintiff during trial. The case was tried by Justice Donald Cerio in Otsego County. Cerio held a hearing outside the presence of the jury which resulted in defendant's pediatric neurologist effectively being precluded on the maternal forces theory, based on his own admissions that he did not have evidence as required by *Parker* to support this theory. The trial resulted in a \$2.1 million verdict for the plaintiff, and the case is now settled.

In *Nobre*, which was decided on Dec. 10, 2013, plaintiff once again challenged the maternal forces theory pursuant to both *Parker* and *Frye*. The court precluded the maternal forces theory under *Parker* and *Muhammad*, finding the defendant had failed to provide reliable evidence with regard to both general causation and specific causation.

The court held that upon a "painstaking review" of all of the submissions presented, it believes that "there is simply too great an analytical gap between the data and the opinion proffered" to render the theory admissible at the trial.

The court continued:

[A]t this juncture, the data and underlying support for Defendants' theory that a permanent brachial plexus injury can result from the maternal forces of labor simply has not reached a sufficient point of reliability to meet the general causation prong of *Parker* and *Muhammad*.

In *Sutryk*, which was decided on Dec. 20, 2013,¹² just 10 days after *Nobre*, Justice Peter Bradstreet likewise precluded the maternal forces theory pursuant to *Parker*.

As in *Nobre*, the *Sutryk* court found there was no reliable scientific evidence of general causation. The court held: "there is simply too great an analytical gap between the data and the opinions offered."

While *Nobre* and *Sutryk* are still pending and subject to appellate review, *Muhammad*, *Brandenburg*, *Nobre* and *Sutryk* may be signaling an emerging consensus among judges who are reviewing this issue in depth pursuant to New York law, specifically *Parker*.

Specific causation under *Parker* is, by definition, case specific. The analysis of these courts as to general causation under *Parker*, however, has potentially broad implications. The general causation evaluation in these cases found that there is no reliable scientific evidence that the maternal forces of labor is "capable" of causing even a "mild" permanent brachial plexus injury. Because of this, these decisions have potentially broad precedential value.

These cases also highlight a willingness of the courts to preclude scientific theory that does not appear to be sufficiently reliable to present to a jury.

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Endnotes:

1. Erb's palsy is the most common subset of brachial plexus injury in birth-related cases, and involves an injury to the upper nerve roots of the brachial plexus.
2. Grimm, et al., "The Biomechanics of Birth-Related Brachial Plexus Injury," Chapter 4 of *The Pathomechanics of Tissue Injury and Disease, and the Mechanophysiology of Healing*, (Research Signpost, 2009: 93-141).
3. E.g., Jennett R. et al., "Brachial Plexus Palsy: An Old Problem Revisited," *Am. J. Obstet Gynecol*, 1992; 166(6): 1673-6; Hankins and Clark, "Brachial Plexus Palsy Involving the Posterior Shoulder at Spontaneous Vaginal Delivery," *American Journal of Perinatology*, Vol 12, No. 1 (1995).
4. E.g., Gherman, et al., "Brachial Plexus Palsy: an In Utero Injury," *American Journal of Obstetrics and Gynecology*, Vol. 180, No. 5 (1999); 180: 1301-1307; Piatt, Joseph H., "Birth Injuries of the Brachial Plexus," *Clinics in Perinatology* 32 (2005): 39-59; Sandmire, et al., "Erb's Palsy Causation: Iatrogenic or Resulting from Labor Forces?" *The Journal of Reproductive Medicine*, Vol 50 No. 8 August 2005, at 566.
5. E.g., Gilbert, et al, "Associated Factors in 1611 Cases of Brachial Plexus Injury," *Obstetrics & Gynecology*. Vol. 93, No. 4 (April 1999); Gherman, et al., "Brachial Plexus Palsy: An In Utero Injury," *American Journal of Obstetrics and Gynecology*, Vol. 180, No. 5 (1999); 180: 1301-1307.
6. Lerner, et al, "Permanent Brachial Plexus Injury Following Vaginal Delivery Without Physician Traction or Shoulder Dystocia," *American Journal of Obstetrics & Gynecology*, (March 2008).
7. Grimm, M & Gonick, B, et al., "Prediction of brachial plexus stretching during shoulder dystocia using a computer simulation model," *American Journal of Obstetrics & Gynecology*, Vol. 189, No. 4, (2003).
8. *Daubert v. Merrell*, 509 U.S. 579 (1993), sets forth a multi-prong test to determine whether expert testimony should be admissible. It is followed in many states, but it has been adopted in New York.
9. See, *Estate of Ford v. Eichner*, 250 P.3d 252 (Col. 2011); *Taber v. Roush*, 316 S.W.3d 139 (Tex. App. 2010); *Ruffin v. Sanders*, 890 N.E.2d 1194 (Ill App. 1st Dist 2008).
10. "Court Finds Invalid Standard Defense in Obstetrical Malpractice Cases," *New York Law Journal*, Feb. 8, 2012.
11. "Another Judge Rejects Use of 'Forces of Labor' Defense," *New York Law Journal*, Jan. 3, 2014.
12. The defense presented affidavits and testimony in both *Nobre* and *Sutryk* from Michelle Grimm, PhD, who is the author of the biometrical computer simulation model which claims to validate the maternal forces theory. This evidence had not been presented by the defense in *Muhammad*.