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**CHORIOAMNIONITIS:
A DEFENSE TO LAWSUITS
INVOLVING CEREBRAL PALSY**

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A. INTRODUCTION

In many Cerebral Palsy cases, the claim against the healthcare providers is that they failed to appreciate that the fetal monitor tracings indicated that the fetus was experiencing hypoxia in utero and, rather than performing an emergent Cesarean delivery, the healthcare providers negligently allowed the labor to continue while the fetus continued experiencing hypoxia until the baby was delivered, but too late to prevent the hypoxia from causing brain damage and the resultant cerebral palsy.

Early decelerations occur during labor when the contractions exert cause pressure on the fetal head or the umbilical cord and cause the fetus' heart rate to drop from the normal baseline which is about 150 beats per minute. The result is a momentary decrease in blood flow to the brain. Generally, decelerations are not harmful if the fetal heart rate recovers quickly and the beat to beat variability is stable. Decelerations that continue after a contraction has ceased are called late decelerations. Excessive and prolonged late decelerations can cause brain damage to the fetus as a result of lack of oxygen from diminished blood flow. This is called hypoxia. The fetal heart tracings demonstrate late decelerations.

Plaintiffs' attorneys, and their experts, rely heavily on the fetal monitor tracings to show the occurrence of late decelerations and the need for an emergency Cesarean delivery. This theory of liability is relatively easy for the plaintiffs' attorney and their experts to demonstrate to the jury because they could point to the fetal monitor tracings where it indicates the occurrence of late decelerations. Since the doctor's decision to delay in delivery is usually a judgment call, often a better defense is to refute causation, i.e., that another cause other than fetal hypoxia resulted in the cerebral palsy.

B. CHORIOAMNIONITIS

1. Definition

Chorioamnionitis is an inflammation of the fetal membranes due to a bacterial infection. The pathology report will indicate the presence of chorioamnionitis.

2. Chorioamnionitis as a cause of Cerebral Palsy

In "*Infectious Diseases of the Female Genital Tract*, Richard L. Sweet, Ronald S. Gibbs, Fifth Edition, Lippincott Williams & Wilkins, Page 317, the authors stated "Recent epidemiologic studies have demonstrated an increased risk of cerebral palsy among infants delivered from pregnancies complicated by fever in labor, clinical chorioamnionitis, or histologic chorioamnionitis".

In an article titled "*Cerebral Palsy Source*," it stated that the incidence of cerebral palsy being hypoxia induced is less than first thought. The incidence of cerebral palsy hypoxia induced occurs only in about 10 percent of cases.

In an article titled "*Maternal Infection and Cerebral Palsy in Infants of Normal Birth Weight*", American Medical Association (1997), the authors concluded that disabling spastic cerebral palsy and signs of neonatal morbidity were attributable to maternal fever exceeding 38 degrees Celsius in labor as well as a clinical diagnosis of chorioamnionitis. The article indicated that newborns exposed to maternal infection, both cases and controls, have five-minute APGAR scores below six more than those unexposed. Among children with Cerebral Palsy, those born to infected women were more often hypotensive, needed intubation, had neonatal seizures and received a clinical diagnosis of hypoxic-ischemic encephalopathy. The authors concluded that intrauterine exposure to maternal infection was associated with a marked increase in risk of Cerebral Palsy in infants of normal birth weight. **Maternal infection was also linked with low APGAR scores, other evidence of hypotension and need for resuscitation and neonatal seizures – signs commonly attributed to birth asphyxia. (Emphasis added).**

In a study titled "*Maternal Chorioamnionitis*", Michael P. Sherman, M.D. and Katsufumi Otsuki, M.D., dated September 22, 2010, *E-medicine Pediatrics: Cardiac Disease and Critical Care Medicine*, chorioamnionitis was known to occur in 12 percent of placentas of white women and other races compared to 55 percent in the black women. The article also indicated that among infants with preterm birth at less than 34 weeks gestation, prolonged rupture of the fetal membranes and male gender was a risk for early onset of sepsis (EOS) caused by chorioamnionitis. Clinical events associated with chorioamnionitis include history of premature birth, presence of premature labor, prematurely ruptured fetal membranes before labor has its onset and prolonged rupture of the fetal membranes. The study further stated that "infants born to mothers with chorioamnionitis have unfavorable neurologic outcomes." The article states that cerebral palsy and cognitive impairment without cerebral palsy have a relationship to the presence of maternal chorioamnionitis.

In an article by the American Pregnancy Association, cerebral palsy was indicated as being caused by infections during pregnancy such as chorioamnionitis to preterm babies and full term babies. **Notably, the article also indicated that contrary to common belief, lack of oxygen reaching the fetus during labor and delivery contributes to only a small minority of cases of cerebral palsy according to a 2003 report by the American College of Obstetricians and Gynecologists and the American Academy of Pediatrics. (Emphasis added).**

An article in *Obstetrics and Gynecology*, August 2010, Volume 116, titled "Chorioamnionitis and Cerebral Palsy: a Meta-Analysis", indicated that a significant association was found between a clinical or histological chorioamnionitis and cerebral palsy. **In an article in the *Journal of Maternal Fetal Neonatal Medicine*, May 2003: 13(5): 323-7, the authors indicated that the mode of delivery, whether vaginally or by cesarean, did not significantly affect the immediate**

neurological status of preterm infants exposed to any natal interuterine infection such as chorioamnionitis. (Emphasis added).

C. Utilizing Chorioamnionitis as a causation defense

The foregoing medial literature indicates that hypoxia is a cause of Cerebral Palsy in only a small percentage of cases, and the most likely cause was due to infection such as from chorioamnionitis. Though chorioamnionitis can cause Cerebral Palsy in full term babies, the risks of Cerebral Palsy caused by chorioamnionitis increase when the baby is preterm, and/or the mother is African American and/or from a low socioeconomic class. Notably, the literature indicates that chorioamnionitis causes conditions commonly attributed to birth asphyxia.

In defending a case where the doctor is claimed to have failed to appreciate that the baby was suffering from hypoxia, an important part of the defense is that, as noted, cerebral palsy is not likely caused by lack of oxygen during labor and delivery. The defense should retain a placental pathologist to analyze the tissue sent for examination. If acute chorioamnionitis had already been diagnosed at the time of delivery, an expert pediatric neurologist and a neonatologist should be retained to offer the opinion that the cerebral palsy was caused by chorioamnionitis and not hypoxia. In addition, a neuroradiologist should be utilized to examine any MRI films of the baby's brain to rule out hypoxia as a cause of the Cerebral Palsy.



Paul Weisbein is a trial attorney whose areas of practice include medical malpractice, construction, professional liability, municipal liability and premises liability. Mr. Weisbein has represented physicians, dentists, nurses, physicians assistants, hospitals, mental health providers and institutions in medical malpractice cases. His clients have also included building contractors, engineers and designers in construction defect cases. In addition, Mr. Weisbein has also represented municipalities in tort and civil rights cases, and airlines and air freight companies in a wide variety of cases from premises liability to aircraft malfunction.