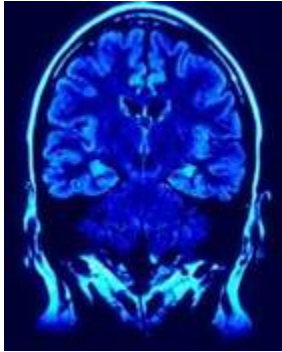


Periventricular Leukomalacia, Brain Injury in Premature Infants

Jul 22, 2010 [Sandra Blake](#)



Periventricular Leukomalacia, PVL, Injury to Brain - *jkt_de*

Periventricular leukomalacia, or PVL, is an ischemic brain injury occurring in fetuses and newborn babies, both term and premature. Premature infants are at greater risk of developing PVL. PVL involves the white matter of the brain surrounding the lateral ventricles.

Cause of Periventricular Leukomalacia

PVL appears to develop due to either decreased blood or oxygen flow to the periventricular region of the brain or because of damage to the glial cells. Glial cells support neurons throughout the nervous system. Premature infants are more likely to have these factors occur, which increases their risk of developing PVL.

Decreased oxygen flow can occur due to a number of reasons. Maternal infections, fetal infections, maternal distress, fetal distress, or an infection of the newly delivered infant can cause a hypotensive episode resulting in decreased oxygen flow.

Diagnosis of Periventricular Leukomalacia

Diagnosis of PVL is generally discovered on a routine ultrasound to check for brain injury during the hospital stay of a premature infant. There are few signs of PVL injury in newborn and premature infants.

Early signs of PVL that an infant may show are extreme stiffness or the inability or poor ability to suckle. Severe PVL injury can be detected with the use of an ultrasound. Magnetic resonance imaging (MRI) is more effective in the diagnosis of PVL.

Treatment and Prognosis of Periventricular Leukomalacia

PVL treatment is only a response to the individual needs of the patient. There is no treatment to cure PVL. Deficits will need to be treated as they present and infants will need to be closely monitored by a neurologist.

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Prognosis of periventricular leukomalacia will depend on the extent of the damage to the white matter of the brain. Some patients have minor deficits and function well, while other patients have significant disabilities and deficits.

Types of deficits patients with PVL may exhibit are developmental delays, deficits in posture, vision problems, motor skill coordination difficulties, spastic diplegia, increased muscle tone, spasticity in lower body, and gait while walking. Patients who suffer from severe PVL may have high muscle tone and seizures and may be confined to a wheelchair. Many infants suffering from severe PVL will develop [cerebral palsy](#).

Patients diagnosed with PVL need to stay informed and have frequent follow-up with their neurologists to discuss treatment options and ongoing studies aimed at supporting and developing improved treatment options for patients with PVL.

References:

1. Medscape "Periventricular Leukomalacia" accessed July 22, 2010
2. National Institute of Health, "Periventricular Leukomalacia" accessed July 22, 2010

Read more at Suite101: [Periventricular Leukomalacia, Brain Injury in Premature Infants](http://www.suite101.com/content/periventricular-leukomalacia-brain-injury-in-premature-infants-a264589#ixzz1Fpe1roH6)
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