Periventricular Leukomalacia

Periventricular leukomalacia (PVL) is characterized by the death of the white matter of the brain. This is due to softening of the brain tissue. It can affect fetuses or newborns. Premature babies are at the greatest risk of the disorder.

CAUSES

PVL is caused by a lack of oxygen or blood flow to the periventricular area of the brain. This results in the death or loss of brain tissue. The periventricular area is the area around the spaces in the brain called ventricles. It contains nerve fibers that carry messages from the brain to the body's muscles.

SYMPTOMS

Babies with PVL generally have no outward signs or symptoms of the disorder. But they are at risk for:

- Motor disorders.
- Delayed mental development.
- Coordination problems.
- Vision and hearing impairments.

PVL may be accompanied by a hemorrhage or bleeding in the periventricular-intraventricular area. That is the area around and inside the ventricles. This can lead to cerebral palsy.

DIAGNOSIS

The disorder is diagnosed by ultrasound of the head.

TREATMENT

There is no specific treatment for PVL. Treatment is symptomatic and supportive. Children with PVL should receive regular medical screenings to determine appropriate interventions.

The prognosis for individuals with PVL depends upon the severity of the brain damage. Some children exhibit fairly mild symptoms. But others have significant deficits and disabilities.

RESEARCH BEING DONE

The NINDS supports and conducts research on brain injuries such as PVL. Much of this research is aimed at finding ways to prevent and treat these disorders.

Research is continually being done to learn more about this problem.

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