Cerebral Palsy

Cerebral palsy (CP) is a broad term used to describe symptoms appearing in the first few years of life that impair (make difficult) control of movement and/or muscle tone.

The symptoms are caused by either faulty development or injury to the areas of the brain that control motor (movement) function and posture. Cerebral palsy may be passed on from parents (*congenital*) or acquired after birth. Common causes of cerebral palsy include:

- Head Injury.
- Meningitis.
- Genetic Disorders.
- Stroke before birth.
- Lack of Oxygen to the Brain.
- Prematurity.

Cerebral palsy does not always cause profound handicap. Early signs of cerebral palsy usually appear before 3 years of age. Infants with cerebral palsy are frequently slow to reach developmental milestones.

SYMPTOMS

Early symptoms – there are developmental delays in:

- Rolling over.
- Sitting.
- Crawling.
- Cruising.

Later symptoms:

- Varied muscle tone (from too stiff to too floppy).
- Exaggerated or diminished reflexes.
- Lack of muscle coordination.
- Difficulty with fine motor tasks (such as writing or using scissors).
- Difficulty with gross motor tasks (such as balance or walking).
- Involuntary movements.
- Poor control of the mouth leading to drooling, chewing and swallowing problems.

The symptoms differ from person to person and may change over time. Some people with cerebral palsy are also affected by other medical problems including:

- Seizures (*convulsions*).
- Mental impairment.

DIAGNOSIS

Doctors diagnose cerebral palsy by:

- Testing muscle tone, motor skills and reflexes.
- Medical history.
- Blood tests if necessary
- Imaging of the Brain and/or Spinal Cord (head ultrasound, CT, and/or MRI).

Although symptoms may change over time, cerebral palsy by definition is not progressive (does not get worse). If a patient shows worsening problems, the diagnosis may be something other than cerebral palsy.

CLASSIFICATION OF CEREBRAL PALSY BY LOCATION

Cerebral palsy can be classified by the number of limbs involved or by the movement. There is also a combined classification that involves a mixture of different variations of CP. About one quarter of people with CP have a mixed form of the disease.

- **Quadriplegia** - All four of the limbs are involved.
- **Diplegia** - The legs are involved with no arm problems.
- **Hemiplegia** - One side of the body is affected, usually the arm more than the leg.
- **Triplegia** - Three limbs are involved, usually one leg and both arms.
- **Monoplegia** - One limb is affected, usually an arm.

CLASSIFICATION OF CERBRAL PALSY BY TYPE

- **Spastic Cerebral Palsy**: This is the most common form of CP. It affects 70 - 80 percent of sufferers. The muscles are in a constant state of spasticity. Tight and stiff muscles move in a jerky motion. Spastic CP is usually due to damage to the cerebral cortex part of the brain.
- **Hypotonic Cerebral Palsy**: Hypotonia means low muscle tone. These people have difficulty with motor delay and weakness. Hypotonic CP may be caused by injuries either to the brain or spinal cord.
- **Athetoid Cerebral Palsy**: Athetosis leads to difficulty controlling and coordinating movement. Athetoid CP occurs when the muscle tone is mixed. Sometimes muscle tone is too high and sometimes it is too low. Involuntary writhing movements and constant motion are common to Athetoid CP. It is usually caused by damage to the basal ganglia in the midbrain.
- **Ataxic Cerebral Palsy**: This is the least common form of CP. This form of CP is the result of damage to the cerebellum, the brain's major center for balance and coordination. Ataxic CP causes:
  - A disturbed sense of balance and depth perception.
  - Poor muscle tone.
  - Scanning speech (syllables are separated by pauses).
  - A staggering walk.
  - Unsteady hands.
  - Abnormal eye movements

TREATMENT

There is no standard therapy that works for all patients. Treatment methods include:

- Medications used to control seizures and muscle spasms.
- Special braces to help with muscle imbalance.
- Surgery – either to treat spasticity or to relax muscle tendons that are too tight.
- Mechanical aids to help overcome impairments.
- Counseling for emotional and psychological needs.
- Physical, occupational, speech, and behavioral therapy.

PROGNOSIS

At this time, cerebral palsy cannot be cured. Many patients can enjoy near-normal lives if their problems are properly managed.

Document Released: 09/09/2003 Document Re-Released: 03/16/2010
ExitCare® Patient Information ©2011 ExitCare, LLC.