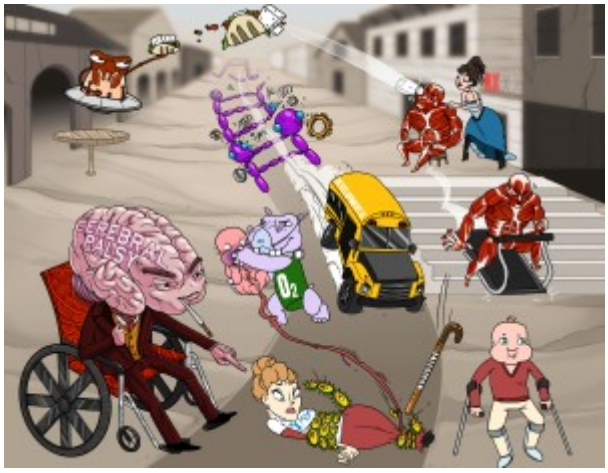
Cerebral Palsy (CP)

Cerebral palsy (CP) is a nonprogressive neuromuscular disorder that occurs in the developing fetal or infant brain. The condition is often caused by maternal infections or fetal hypoxia. The degree of functional abilities among patients with cerebral palsy varies greatly. Some patients are able to walk and some present with normal intellectual function while others may experience epilepsy, blindness, or deafness. The condition may cause delayed development, muscle spasticity, dysphagia, and neurological dysfunction. Muscle relaxants such as dantrolene (Dantrium) or baclofen (Gablofen) may be administered to help with muscle spasticity. Muscle exercises implemented by physical therapy will help increase the patient's strength, flexibility, balance, and mobility. Assistive devices such as walkers and wheelchairs may be used to help increase the patient's mobility. Braces and splints may help stretch stiff muscles and prevent contractures.



PLAY PICMONIC

Cause/Mechanism

Maternal Infections
Mother with Infectious-bacteria
Infections acquired by the mother during pregnancy may lead to the development of cerebral palsy in the fetus. Common maternal infections include rubella, varicella, cytomegalovirus, and syphilis. After birth, the newborn infant may also acquire an infection leading to brain inflammation and subsequent cerebral palsy. Newborn infections include bacterial meningitis, viral encephalitis, and severe, untreated jaundice.

Fetal Hypoxia
Fetus Hippo-O2
A difficult labor or delivery may decrease the amount of oxygen to the brain and cause fetal hypoxia. The disruption of blood supply to the developing fetal brain may cause fetal stroke and ultimately cerebral palsy.

Assessment

Developmental Delay
Developmental-bus
Fetal or neonatal brain injury may cause developmental delays characterized by not reaching certain milestones at expected times. The infant may present with gross motor development delays caused by abnormal muscle development and coordination. Since cerebral palsy often affects the limbs, assess the patient's arms and legs for hypertonia or hypotonia. Cerebral palsy may also present with impaired torso control and difficulty balancing. Infant reflexes may be absent or persist after expected disappearance.

Neurological Dysfunction
Nerve-guy Dysfunctioning
Cerebral palsy may cause neurological dysfunction, including intellectual disabilities and psychiatric conditions. The patient may experience seizures, urinary incontinence, or abnormal touch and pain perception.

Spasticity
Space-tick
Muscle spasticity and involuntary movement a common manifestations in patients with cerebral palsy. Muscle spasticity is characterized by stiff muscles and exaggerated reflexes, while muscle rigidity presents with stiff muscles and normal reflexes. The patient may demonstrate jerky, uncoordinated cross-knee movements, such as taking short steps while dragging both feet. Cerebral palsy patients with ataxia lack muscle coordination.

Dysphagia
Dice-fajitas
Lack of muscle coordination in patients with cerebral palsy may cause dysphagia and present with excessive drooling. Malnutrition develops because the patient has difficulty sucking and eating.

Interventions

Sign up for FREE at picmonic.com

Muscle Relaxants

Muscle-man Masseuse

Muscle relaxants are indicated for the treatment of generalized spasticity in patients with cerebral palsy. Side effects of the medications include sleepiness and nausea. Examples of muscle relaxants include diazepam (Valium), dantrolene (Dantrium), and baclofen (Gablofen).

Muscle Exercises

Muscle-man Exercising

Muscle exercises implemented by physical therapy will help address muscle spasticity in patients with cerebral palsy. The exercises increase the patient's strength, flexibility, balance, motor development, and mobility.

Assistive Devices

Assistive Cane

In patients with cerebral palsy, muscle spasticity may affect the ability to walk. Assistive devices such as walkers, quadrupedal canes, and electric wheelchairs are recommended to increase the patient's mobility and independence.

Braces

Braces

In patients with cerebral palsy, braces and splints may be used to prevent contractures by stretching stiff muscles. They may also improve the patient's ability to ambulate. Muscles and tendons that are shortened by contractures may be corrected with orthopedic surgery. Selective rhizotomy is performed on the sensory nerves in order to relax stiff muscles and decrease pain.

Sign up for FREE at picmonic.com