

UNIT 6 - NERVOUS SYSTEM / SPECIAL SENSES

ACTIVITY – Diseases of the Central Nervous System

A. This is the most common cause of crippling in children and results from prenatal, prenatal, or postnatal CNS damage due to anoxia. Motor impairment may be minimal or severely disabling. Associated defects, such as seizures, speech impairment, and mental retardation are common. This disorder cannot be cured but proper treatment can help the child reach his/her full potential.

The disorder is: _____

B. This disorder is an excessive accumulation of cerebrospinal fluid with the ventricles of the brain. It occurs most often in newborns. The head is enlarged and the brain may be compressed causing brain damage. Early detection and surgical intervention improves the prognosis. Complications of the surgery include infection of the shunt.

The disorder is: _____

C. In this disorder there is defective closure of the spinal cord (neural tube) during the first trimester of pregnancy that results in malformation of the spine. These defects generally occur in the lumbosacral area. There may be protrusion of the spinal contents in a sac. Prognosis varies with the degree of neurological deficit. The children may have paralysis, difficulty walking, and experience incontinence of bladder and bowel. Women in childbearing years should take folic acid to decrease the risk of this defect in children.

The disorder is: _____

D. This disorder most commonly begins as a patient complaint, but is usually a symptom of an underlying disorder. Ninety percent are caused by vascular problems or muscle contractions. Most chronic disorders are caused by muscle contractions and are known as _____.

Its symptoms include a persistent dull ache, and a feeling of tightness around the head. This disorder may be treated with aspirin, Tylenol, Motrin, and possibly narcotics. The other common disorder is caused by constriction and dilation of the intracranial and extracranial arteries. Its symptoms include unilateral, pulsating pain and may be accompanied by vomiting, photophobia, nausea and irritability. This disorder is known as _____. It is treated with ergotamine, caffeine, and other vasoconstrictors.

E. This is a condition of the brain that is marked by susceptibility to recurrent seizures that are associated with abnormal electrical discharges in the neurons of the brain. The causes are unknown, but may include birth trauma, infection, anoxia, and brain tumors. Treatment includes medication such as dilantin, Phenobarbital, and tegretol to control seizures.

The disorder is: _____

F. This is a sudden impairment of the cerebral circulation in one or more of the blood vessels that supply the brain. The blood vessels may rupture or be blocked by fat or a blood clot. This disrupts the supply of oxygen to the brain and causes necrosis in the brain tissue. It is the third most common cause of death in the United States. Factors that increase your risk of this disorder are atherosclerosis, lack of exercise, diabetes mellitus, use of oral contraceptives, cigarette smoking, high triglyceride levels and a family history. Symptoms include weakness or paralysis on one side of the body, aphasia, dysphasia, personality changes, headache, and mental confusion. Treatment includes improving circulation to the brain by the use of anticoagulants, maintaining an open airway, ensuring adequate nutrition, and rehabilitation.

The disorder is: _____

G. In this disease, the covering(s) of the brain and spinal cord (usually the pia mater) become inflamed, usually the result of bacterial infection. Treatment includes early recognition and antibiotic therapy. Symptoms include a sore neck when the patient is lying down and the practitioner pulls the head forward and the patient flexes his hips and knees in response, fever, chills, malaise, anorexia, and changes in the cerebrospinal fluid.

The disease is: _____

H. This disease is sometimes referred to as the shaking palsy as involuntary tremors are one of the cardinal signs. It is one of the most crippling diseases in the United States, striking 1 in every 100 people. There is a dopamine (neurotransmitter) deficiency, which prevents brain cells from performing their normal inhibition or stopping of nerve impulses within the CNS. Muscle rigidity may occur. The cause is unknown. Death usually occurs 10 years after the disease is diagnosed. There is no cure for this disease. The primary aim of treatment is to relieve symptoms and keep the patient functional for as long as possible with the use of drugs and physical therapy. Stem cell research may be a promising venue for future medical care. Michael J. Fox, Janet Reno, Pope John Paul and Mohammed Ali both are afflicted with this disorder.

The disorder is: _____

I. The cause of this disorder is unknown. There are progressive changes in the neurons of the brain due to a lack of neurotransmitters in the brain, trauma, and genetics. The onset is slow. In the beginning, the patient will have very mild changes such as memory loss, forgetfulness, and difficulty learning new information, deterioration in personal hygiene and appearance, and an inability to concentrate. As the disorder progresses, personality changes may be seen. Physical disability progresses and death usually results from infection. Stem cell research may be promising. Former President Ronald Reagan was afflicted with this disorder.

The disorder is: _____

J. This is an acute childhood illness that causes fatty infiltration of the liver and brain, encephalopathy, and increased intracranial pressure. It almost always follows within 1 to 3 days of an acute viral infection, flu, or chicken pox. It is common in infants and children. The incidence often arises during flu outbreaks and may be linked to aspirin use. Symptoms include vomiting, mood changes, confusion, tachycardia, and tachypnea. Treatment involves treating the symptoms.

The disease is: _____

K. This disease is the most common motor neuron disease of muscular atrophy. Onset occurs between the ages of 40 and 70. The causes of this disease include autoimmune disorders, disturbance in motor neuron enzyme metabolism, difficulty producing nucleic acids, severe stress, trauma, and physical exhaustion. The symptoms include muscle weakness, muscle atrophy, dysphasia, dysphagia, and dyspnea. Mental deterioration usually does not occur, but depression is a common response to the disease process. Death usually occurs within 2 to 5 years after diagnosis as there is no effective treatment available.

The disease is: _____

L. This is the most common head injury resulting from a blow to the head – a blow hard enough to jostle the brain and make it hit against the skull causing temporary neural dysfunction. Precipitating causes include a fall to the ground, a punch to the head, automobile accidents and child abuse. Most victims recover within 24 to 48 hours after the injury. Symptoms of this disorder include a loss of consciousness, vomiting, possible amnesia, dizziness, headache, and lethargy. Treatment includes monitoring the vital signs, mental status, level of consciousness, and pupil size.

The disorder is: _____

M. This disorder results from a sharp hyperextension and flexion of the neck that damages the muscles, ligaments, disks and nerve tissue. It is common after rear-end automobile accidents. Padded headrests and shoulder harnesses reduce the risk of this type of injury. Symptoms include pain in the anterior and posterior neck. It may also cause vomiting, dizziness, headache, neck rigidity, and numbness in the arms. Treatment includes immobilizing the neck at the scene of the accident, ruling out spinal cord injury, analgesics, warm compresses, a cervical collar, and possible physical therapy.

The disorder is: _____

N. This is commonly referred to as a broken neck and involves injury to the spinal cord. The more superior the injury, the more permanent damage results to the patient. Causes of the injury include motor vehicle accidents, falls, sporting injuries (football, skiing), diving into shallow water, and gunshot wounds. Paralysis of the body may occur. If the lower half of the body is paralyzed, the patient is considered to be a paraplegic. If the body from the neck down is paralyzed, the patient is considered to be a quadriplegic. Treatment involves maintaining vital functions and rehabilitation to maintain the use of muscles.

The disorder is: _____

O. This is a sad mood, which may be a primary disorder, a response to a disease process or a drug reaction. Causes may include genetic, familial, biochemical, physical, and physiological processes. The person may have feelings of helplessness, anger, hopelessness, low self-esteem, and pessimism. Other symptoms include weight loss or weight gain, sleep disturbance, depressed mood most of the day, energy loss, fatigue, difficulty thinking or concentrating. Treatment may involve psychotherapy, drug therapy, counseling and light therapy.

The disorder is: _____

KEY - DISEASES OF THE CENTRAL NERVOUS SYSTEM

1. cerebral palsy (CP)
2. hydrocephalus
3. spina bifida
4. tension headaches; migraines
5. epilepsy
6. cerebrovascular accident (CVA)
7. meningitis
8. Parkinson's Disease
9. Alzheimer's Disease
10. Reyes Syndrome
11. Lou Gehrig's Disease; ALS; amyotrophic lateral sclerosis
12. concussion
13. whiplash
14. spinal cord injury (SCI)
15. depression