

## DISORDERS OF CNS

### Meningitis

- Inflammation of lining of brain & spinal cord
- Cause – bacterial or viral
- Symp – HA, fever, & stiff neck
  - Severe = paralysis, coma, or death
- Tx – if bacterial = antibiotics

### Encephalitis

- Inflammation of the brain
- Cause – virus or chemical
- Symp – fever, lethargy, extreme wkness, & visual disturbances
- Tx – symptoms

### Epilepsy

- Seizure disorder of the brain
- Cause – uncertain
- Symp – hallucinations, seizures, & loss of consciousness. (severe = grand mal)
- Tx – medications (anticonvulsants, Phenobarbital, dilantin, & tegretol)

### Cerebral Palsy

- Disturbance in voluntary muscle action d/t brain injury
- Cause – definite unkn.
- Symp – spastic quadriplegia, spastic paralysis of all four limbs ( head rolling, grimacing, diff speech & swallowing)
- Tx – symptoms, really none d/t damage

### **Poliomyelitis**

- Disease of nerve pathways of spinal cord = paralysis
- Tx – Sabin & Salk vaccines

### **Hydrocephalus**

- Condition with increased volume of cerebrospinal fluid in ventricles
- Cause – blockage somewhere in 3<sup>rd</sup> & 4<sup>th</sup> ventricles
- Symp – enlargement of head, usually noted at birth
- Tx – bypass or shunt operation

### **Parkinson's Disease**

- Characterized by tremors, a shuffling gait, pill-rolling, & muscular rigidity.
- Pt has difficulty initiating movement
- Cause – decrease in neurotransmitter, dopamine
- Tx – medication, L-dopa & others that help control symptoms

### **Multiple Sclerosis (MS)**

- Chronic inflammation disease of CNS, immune cells attack myelin sheath of axon
- Cause – unknown
- Symp – wkness of extremities, numbness, double vision, nystagmus (tremor of eye), speech problems, loss of coordination, & possible paralysis
- Tx – Interferon & Avonex, adequate rest, exercise, decrease stress

## **Dementia**

- General term used to include specific disorders such as Alzheimer's disease, vascular dementia, & others
- Loss of 2 (at least) areas of complex behavior, i.e. language, memory, visual or spatial abilities, judgment which sig. Affects daily living
- Everyone forgets at times, doesn't mean dementia

## **Alzheimer's**

- Progressive dis, initially has problem remembering recently learned information
- Cause – unknown, but.....
- Usually three stages
  - 2-4 years confusion, short term memory loss, anxiety, & poor judgment
  - 2-10 years, increasing memory loss, diff recog people, motor problems, logic problems, loss of social skills
  - inability to recog self, wt loss, seizure's, mood swings & aphasia
- Tx – help prevent = cont education, CV exercise, estrogen replacement, antioxidants, beta-carotene, & use of anti-inflammatory agents.

## **Brain Tumors**

- May develop in any area of brain
- Symp – depend upon area of brain involved
- Tx – early detection, surgery, & chemotherapy
  - May cure some tumors

## Hematoma

- Localized mass of blood collection & may occur in the spaces bet meninges
- Cause – blow to head

## Disorders of the PNS

### Neuritis

- Inflammation of a nerve or a nerve trunk
- Symp – severe pain, hypersensitivity, loss of sensation, muscular atrophy, wkness, paresthesia (tingling, burning or crawling of the skin)
- Causes – infections, chemicals, or other conditions such as alcoholism (usually d/t lack of Vit B)
- Tx – determine cause 1<sup>st</sup>, to eliminate symptoms, i.e. pain = analgesics

### Sciatica

- Form of neuritis, affects sciatic nerve.
- Cause – rupture of lumbar disc or arthritic changes
- Symp – pain that radiates to buttocks, behind knee to foot, may have diff waling
- Tx – traction, physiotherapy, exercises, & possible surgery

### Neuralgia

- Sudden, sever, sharp, stabbing pain along nerve path
- Pain brief & may be a symp of a disease
- Forms are named according to nerve it affects.

### Trigeminal

- Involves 5<sup>th</sup> nerve
- Cause – unknown, onset very rapid
- Pain is severe
- Tx – analgesics or partial removal of nerve

### Bell's Palsy

- 7<sup>th</sup> nerve, pt seems to have a stroke on one side of face, because it only affects one side.
- Symp – eye doesn't close properly, mouth droops, & numbness
- Cause – unknown
- Tx – massage & heat application, pt must whistle exercise to prevent atrophy of cheek muscle, symp usually last few weeks with residual effects.

### Shingles or Herpes Zoster

- Acute viral nerve infection
- Symp – extreme painful vesicular eruptions of the skin & mucous membrane along path of inflamed nerve, freq in elderly
- Causative organism – herpes zoster, same virus that causes chicken pox
- Tx – analgesics for pain & medicine to relieve prurities (itching)

## **Carpal Tunnel Syndrome**

- Condition affects the median nerve & the flexor tendons attached to the bones of wrist (carpal)
- Developed d/t repetitive movement of wrist
- Swelling around the carpal tunnel, median nerve passes through this
- Swelling cause pressure on nerve
- Results in pain, muscle weakness, & tingling sensation in the hand
- Dx – EMG, electromyography – record of muscle activity.
- Tx – immobilize wrist joint, if not effective = surgery