

Peripheral Disorders

Trigeminal Neuralgia

- I. Disease affecting the _____ cranial or _____ nerve
 - A. Abrupt agonizing one sided pain affecting area innervated by the trigeminal nerve
 - B. Classic Type 1, Type 2 Atypical
 - C. Statistics
 1. Usually over age 40 and more women than men affected

- II. Risk factors: hypertension, MS, herpes, teeth/jaw infection, brainstem infarct

- III. Pathophysiology
 - A. Cause not definitive
 1. superior cerebellar artery in some patients is abnormally compressed causing nerve irritation and demyelination
 - B. Three branches of the Trigeminal Nerve: ophthalmic, maxillary, mandibular.
Trigeminal Neuralgia commonly affects maxillary and mandibular branches

- IV. Clinical Manifestations
 - A. Pain
 1. Abrupt onset
 2. one sided pain
 3. duration lasts a few seconds to a few minutes
 4. sharp, piercing, shooting, burning, excruciating pain
 5. twitching, grimacing, blinking, tearing
 6. locations in the lips, gums, cheek, forehead, and nose
 7. unpredictable occurrences
 - B. Trigger Zones
 1. zone that will initiate pain with benign event
 - a. small localized area on face
 - b. stimuli:
 - C. Impacts ADL's

- V. Diagnosis
 - A. Signs and symptoms, rule out other issues that could cause (tumors, MS)

- VI. Treatment
 - A. Anti-epileptics: carbamazepine (Tegretol), oxcarbazepine (Trileptal)
 1. Reduces firing of afferent/sensory fibers by stabilizing nerve cell membranes
 - B. Nerve Blocking
 - C. Surgery
 1. Glycerol Rhizotomy
 - a. Percutaneous injection of glycerol to ablate trigeminal nerve
 2. Microvascular Decompression
 - a. Blood vessels are relocated or removed that are contacting nerve
 - b. Outcome is usually high success
 3. Gamma Knife Radiosurgery
 - a. Local destruction to nerve root with radiation

- 4. Postoperative-corneal reflex, extraocular muscles, hearing, facial expression and sensation
- D. Other therapies: acupuncture, biofeedback, yoga

- VII. Nursing Management
 - A. Pain is priority
 - B. Identify triggers and avoid
 - C. Maintain hygiene
 - D. Nutrition and Hydration
 - E. Anxiety and Ineffective Coping

Bell's palsy

- VIII. Acute paralysis of cranial nerve _____
 - A. unilateral flaccidity and inability to close eye
- IX. Affects any age, 20-60 most common, Both genders affected
- X. Pathophysiology- inflammation of facial nerve leads to compression of nerve
- XI. Clinical manifestations
 - A. Warning Sign:
 - B. Onset: sudden or gradual
 - C. Affected side of the face
 - 1. eye doesn't close, wide palpebral fissure eyelid opening, flat nasal fold
 - 2. no expression, mask like- unilateral drooping: may have drooling too
 - 3. constant eye tearing may happen, or inability to make tears
 - 4. taste, may have unilateral loss of taste
 - 5. tinnitus, fever, hearing deficit
- XII. Diagnosis-based on symptoms and can measure nerve transmission with an EMG
- XIII. Treatment
 - A. Medications
 - 1. Analgesics
 - 2. corticosteroids
 - 3. Antivirals- acyclovir, valacyclovir, others to suppress HSV
 - B. Other
 - 1. Massage & moist heat
 - 2. nerve stimulation
 - 3. facial exercises each day- grimace, wrinkle, relax, eyes closed / open, blow air out of cheeks: may need to use facial sling

4. avoid cold drafts

XIV. Nursing Management

- A. Psychological and emotional support
- B. Protect Eye
- C. Nutrition
- D. Prognosis & Recovery- usually benign with recovery in weeks to months.

Guillain Barre Syndrome

- I. Acute autoimmune attack on the myelin of peripheral nerves characterized by ascending symmetrical weakness of the limbs and muscles.
 - A. Progression: Rapid
 - B. Potential: potentially fatal 5% of cases, but most recover
 - C. More with men and adults

- II. Pathophysiology
 - A. Cause is unknown
 - 1. edema, inflammation, and demyelination of nerves by immune response usually after an infection
 - 2. nerve transmission is interrupted and slowed, muscles atrophy
 - 3. remyelination happens in recovery, slowly
 - 4. Stimulating factors: viral infection, bacterial infection, trauma, surgery, immunizations, HIV

- III. Clinical Manifestations
 - A. Within weeks of precipitating factor
 - B. Motor weakness- symmetrical, ascending paralysis
 - C. Sensory
 - 1. paresthesia and pain
 - a. burning, tingling, numb
 - b. hyperesthesias-increased sensitivity to touch
 - c. cramping, aches
 - d. gloves and stockings-symptoms often in hands/feet
 - D. Reflexes
 - 1. Hypotonia-decreased reflex response
 - 2. Areflexia-no reflex response
 - E. Autonomic dysfunction
 - a. Cardiac arrhythmias
 - b. HTN, orthostatic hypotension
 - c. Bowel and bladder dysfunction
 - d. Flushing, diaphoresis
 - F. Brainstem and Cranial nerves
 - 1. CN 7
 - 2. CN 3,4,6
 - 3. CN 9,10
 - 4. CN 5

- IV. Diagnosis
 - A. Presentation
 - B. History
 - C. CSF protein
 - D. EMG and Nerve conduction studies

- V. Complications
 - A. Respiratory Failure
 - 1. ascending weakness progresses
 - 2. continuous monitoring
 - B. Immobility

- VI. Medical Management
 - A. Medical emergency because of possible respiratory/cardiac involvement
 - B. Plasmapheresis
 - 1. Temporary decrease in circulating antibodies: remove liquid portion of blood (plasma) replace RBC's
 - 2. start early after symptoms begin
 - 3. speeds recovery-decreases hospital stay-earlier improvement
 - C. IV Immunoglobulin-stops the autoimmune response
 - 1. IVIG – high dose
 - 2. effective, available, and low risk

- VII. Nursing Care
 - A. Respiratory support
 - 1. Ventilation support PRN
 - 2. Assessments & Interventions for Respiratory System
 - 3. High risk for:
 - 4. Prognosis
 - a. Ventilator support for as long as needed (weeks)
 - B. Autonomic Dysfunction
 - C. Nutrition
 - D. Mobility
 - E. Support