

POST-POLIO SYNDROME



WHAT IS IT?

- Poliomyelitis: virus causing inflammation of the meninges of the anterior horn cells with loss of spinal and bulbar motor neurons
- Post-polio: 25-40% of people who contracted poliomyelitis experience a new onset of symptoms 15-40 years after their initial infection



PRESENTATION



- Asymmetric flaccid paralysis of the legs more than the arms
- Fatigue
- Joint and muscle pain
- Weakness
- Respiratory difficulties
- Decreased endurance
- Cold Intolerance
- Slow, steady progression of weakness at a rate of 1-2% per year

DIFFERENTIAL DIAGNOSIS

- Recovery after post-polio is impacted by 3 things: the number of motor units that recover and resume normal function, the number of motor neurons that sprout axons to re-innervate the muscle fibers that died, and muscle hypertrophy
- Know what collateral sprouting is: a single motor neuron innervates significantly more muscle fibers than it did before the person contracted poliomyelitis
- Survivors have significantly larger motor units that are performing work that was previously performed by many motor units
- Failure of oversized motor units that result from collateral sprouting because they are being overworked
- Anything related to viruses or infections
- Myalgias or myopathies
- Transverse myelitis
- Guillain Barre
- MS
- Encephalitis
- Peripheral neuropathy
- ALS



SPECIAL TESTS



- MD diagnoses typically based on symptoms of neck and back stiffness, abnormal reflexes, difficulty swallowing
- Post-polio: you have to have been diagnosed with polio before
- You have an increased likelihood of being diagnosed with post-polio syndrome if you have the following factors at initial polio diagnosis: age >10 years old, prior hospitalization for the acute illness, ventilator dependency, paralytic involvement of all 4 extremities, and a rapid return of functional strength following extensive initial involvement

TREATMENT EXAMPLES

- Always want to educate about energy conservation techniques and breathing
- May benefit from glossopharyngeal breathing; makes breathing easier
- Assisted coughing strategies
- Decrease stress on joints utilizing orthoses, assistive devices, weight loss
- Encourage submaximal, short duration exercise, cardiovascular conditioning and stretching



ON THE NPTE



- Know the best initial intervention when post-polio is suspected: instruct patient in activity pacing and energy conservation techniques

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