

Post-polio Syndrome (PPS): Information for Physicians

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An early outline of an article published in The Canadian Family Physician; April 1995, entitled "Practical Tips on Post-polio Syndrome."

About 64% of people who had paralytic polio have symptoms of PPS. The median age of polio survivors in the United States is 48 years so the prevalence of PPS and the need for treatment will only increase over time. These patients have generally not been treated by health professionals who are comfortable or conversant with polio as a chronic disabling condition with delayed manifestations.

Symptoms (% of PPS patients with symptoms)

1. Fatigue (83-91%)
2. Joint and muscle pain (71-86%)
3. Muscle weakness (87-95%)
4. Psychological Stresses
5. Cold Intolerance (29-56%)
6. Respiratory Insufficiency (39-42%)
7. Difficulty Swallowing (10- 20%)

SYMPTOMS

Emg studies can confirm the history of acute poliomyelitis but no tests can reliably diagnose PPS. The diagnosis is based on clinical findings. Those who have experience with PPS generally agree that symptoms have qualitative features that are reasonably characteristic.

1. Fatigue (83-91%) Described as: "hitting the polio wall", "lack of energy", "lack of desire to do things", "heavy sensation in the muscles", "increasing loss of strength during exercise", "flu-like aching with change in energy and endurance". Fatigue tends get worse as the day goes on.
2. Joint and muscle pain (71 - 86%) Due to years of overstress of joints, ligaments, and tendons and overuse of muscles. Muscle pain is usually a deep, aching pain but may be "close to the surface", "crawling" or "cramping".
3. Muscle weakness (87-95%) Diagnostic Criteria For Post-polio Muscular Atrophy (PPMA)
 1. A credible history of poliomyelitis
 2. Partial recovery of function
 3. A minimum 10 year period of stabilization after recovery
 4. Subsequent development of progressive muscular weakness
 New atrophy appears in fewer than half of the patients with new weakness,(28-39%) Weakness can occur in muscles that had symptoms during the original polio (69-88%) or in muscles that did not appear weak during the original polio.(50-61%) New weakness is often random and scattered.
4. Psychological Stresses (causes increased symptoms in 62-70%) - difficulty concentrating and collecting thoughts when fatigued - recurrence of a supposedly old resolved problem -lack of diagnosis from the medical community - Type "A", independent, perseverent, obstinate, detached, creative, denying of limitations "polio personality" makes life-style changes difficult

to accept.

5. Cold Intolerance (29-56%) Increasing fatigue and weakness when exposed to cold. May have coolness and colour change to a violet hue of the effected arm or leg.

6. Respiratory Insufficiency (39-42%) More common in people who needed ventilator during the acute polio.

7. Difficulty Swallowing (10-20%) Food sticking, coughing or choking with swallowing.

MANAGEMENT

Treat complicating medical problems (including anemia, thyroid, obesity, infections, diabetes etc.)

1. Excessive fatigue

Energy conservation measures, rest or sleep breaks (sleep decreases fatigue better than rests.) Overexertion, emotional stress, cold temperatures, and hot temperatures increase fatigue. ?Prescribe or recommend?(B vitamins, eldepryl, pyridostigmine, amitriptyline.) None of these has been fully tested.

2. Muscle and joint pain and joint instabilities

Overexertion, emotional stress, cold temperatures, and hot temperatures cause increased pain. Decrease mechanical stress on joints, weight loss, decrease in activities causing overwork (pain, burning, aching). Return to using assistive devices (including orthoses, wheelchairs, adaptive equipment). Anti-inflammatory medications (use sparingly so patients do not continue to overuse damaged joints and muscles). Massage. Evaluate orthopedic disease.

3. Muscle Weakness

Do or arrange muscle strength testing and EMG studies. Overwork of weakened muscles will result in more weakness. Overexertion, emotional stress, cold temperatures, and hot temperatures cause increased weakness. Decrease physical stress on muscles and joints. Prescribe non-fatiguing (sub maximal, short duration) strengthening exercises. Stretching exercises to maintain flexibility. Heart and lung conditioning, ?follow creatine kinase.

4 Psychological counseling and support

Make the diagnosis. Contact local polio survivors' group. Encourage adjustment to required lifestyle changes. Weakness, fatigue, muscle pain and joint pain improved or resolved in those who complied with suggestions for life style changes. Assess sleep disturbances (consider depression, or sleep apnea).

5. Cold Intolerance (29-56%)

Insulate from cold. In cold weather dress for temperatures about 10 deg. C colder than the actual temperature.

6. Respiratory Insufficiency (39-42%)

Pulmonary function tests +/- referral to Pulmonologist, Pneumovax and Influenza vaccines, Eliminate smoking. Treat obstructive disease. Treat sleep apnea. Assist ventilation if necessary. Treat secondary heart failure.

7. Difficulty Swallowing (10-20%)

Refer to specialist for assessment.



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