

Post-Polio Syndrome

Mains: GS II - Health

Why in News?

Recently, it is found that survivors of polio may develop an insidious condition known as Post-Polio Syndrome (PPS).

What is post-polio syndrome?

- **Post-polio syndrome (PPS)** - It is a condition that affects people who have had polio, causing new or worsening muscle weakness, fatigue, and muscle/joint pain many years after the initial infection.
- It develops 10 to 40 years after the initial illness and is a progressive disorder caused by the deterioration of motor neurons.
- **Symptoms** - The symptoms include
 - **Muscle weakness and atrophy** - New or increasing weakness and a decrease in muscle size.
 - **Fatigue** - Extreme tiredness that can be either general or muscular.
 - **Pain** - Aching pain in muscles and joints, often in areas affected by the original polio.
 - **Other symptoms** - Sleep disturbances, breathing difficulties (in more severe cases), joint and skeletal deformities.
- **Causes**
 - The exact cause is not fully understood, but a leading theory suggests that the nerve cells that survived the initial polio infection become overworked over time.
 - These surviving nerve cells may have to "compensate" for the ones that were destroyed by the polio virus.
 - After many years of this extra work, these nerve cells may begin to fail, leading to the new symptoms.
- **Global concern** - PPS is a growing concern around the world.
- Since the severe polio epidemics of the 1940-60s led to millions of people surviving polio, many of these people are now older adults experiencing PPS.
- From a functional perspective, the decline in function can impact mobility, independence, work ability and quality of life.

What are the long-term consequences?

- **Progressive muscle weakness** - Muscles continue to weaken, leading to a gradual loss of muscle mass over time.

- **Chronic pain** - This can be both muscular and joint-related, often caused by the increased stress on muscles and joints from a lifetime of compensating for weakness.
- **Increased risk of falls** - Leg muscle weakness can make it difficult to maintain balance, increasing the risk of falls and subsequent injuries.
- **Skeletal deformities** - The long-term stress on the body can contribute to skeletal issues like scoliosis (a curvature of the spine).
- **Osteoporosis** - This is a potential complication where bones become weak and brittle.
- **Sleep disorders** - Frequent waking and difficulty returning to sleep are common, which can worsen fatigue.
- **Difficulty with daily activities** - Weakness can make it challenging to perform activities like walking, climbing stairs, and lifting objects.
- **Breathing problems** - In more severe cases, the muscles that control breathing can weaken, leading to chronic respiratory issues.
- **Swallowing difficulties** - Weakening of the muscles used for swallowing can also occur.
- **Malnutrition and dehydration** - Difficulty swallowing can lead to problems with eating and drinking, potentially causing malnutrition and dehydration.
- **Sensitivity to cold** - Many individuals with PPS experience increased sensitivity to cold temperatures.
- **Impact on mental health** - The chronic nature of the condition can significantly impact a person's quality of life and mental well-being.
- **Paralysis** - The poliovirus attacks motor neurons in the spinal cord, leading to muscle weakness or paralysis in some victims.
- Many survivors recover significantly, thanks to the nervous system's capacity to "sprout" compensatory connections.
- However, decades later that very compensation may start to fail.
- Estimates suggest PPS may affect anywhere from 25% to 40% of polio survivors, although depending on the criteria used it could range more widely (some reports say up to 80 %).

What are treatments to PP syndrome?

- **No specific treatment** - There's currently no specific treatment for post-polio syndrome (PPS).
- Instead, healthcare providers focus on managing symptoms and improving quality of life.
- It's important to see a healthcare provider who specializes in treating neuromuscular conditions if you have PPS.
- **Non-fatiguing exercises** - Exercises that don't cause pain or fatigue may improve muscle strength and reduce overall fatigue.
- **Cardiorespiratory endurance training** - Cardiorespiratory endurance is the level at which your heart, lungs and muscles work together when exercising for a prolonged time.
- You should talk to your provider before trying this type of training.
- **Mobility aids** - Devices such as canes, walkers and scooters can help with mobility and help avoid rapid muscle tiring and exhaustion.
- **Occupational therapy** - An occupational therapist can help you make adjustments in

your home so you can perform daily tasks more easily.

- **Speech therapy**– If PPS has made swallowing difficult, a speech therapist can help.
- **Lifestyle changes** – Your provider will likely recommend eating a healthy diet, managing your weight, getting quality sleep and not smoking to help manage your symptoms and stay healthy.
- Counseling (psychotherapy) may help you and your family adjust to life with PPS.
- Support groups that encourage self-help and sharing experiences can be beneficial as well.

What lies ahead?

- As the polio survivor population ages, clinicians and health systems need to be aware of PPS — it is frequently under-diagnosed or mislabelled as “just ageing” or “arthritis.”
- Vigilance involves asking about a past history of polio in older patients with new weakness/fatigue; evaluating for other causes, and then implementing a multidisciplinary care plan.
- From a public health perspective, it is also a reminder of just how powerful—and long-lasting—the benefits of vaccination are.
- Preventing polio in the first place means you avoid not just the acute illness, but the decades-later burden of PPS.
- Surviving polio doesn’t always mean you are done with it. Many people come through the acute phase, recover well and then decades later hit a second curve of new problems.
- As doctors, we must bring PPS into our radar, treat it with respect, and help our patients adapt their lives rather than suffer passively.
- For survivors, the message is, if you had polio, and you’re noticing new fatigue, weakness or pain don’t just shrug it off as “ageing” , ask your doctor about PPS, get the right rehabilitation and support, and make sure mobility and quality of life remain in your hands.

References

- 1.[The Hindu| Post - Polio Syndrome](#)
- 2.[Cleveland Clinic| PP syndrome](#)