Postpolio Syndrome May Not Be Progressive

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THE SYMPTOMS of fatigue, weakness, and pain that characterize the so-called postpolio syndrome -- which a few years ago seemed to be growing more severe among persons who have had poliomyelitis (JAMA, 1986;255;1397-1399, 1403-1404, 1541-1546, 1547) -- may not continue on a downhill course.

This is the indication from the first 5-year follow-up of 10 persons in the 50-subject study of postpolio patients being conducted by the Mayo Clinic, Rochester, Minn.

However, says Anthony J. Windebank, MD, professor of neurology and one of the study investigators, with only 10 patients evaluated so far, initial findings have to be taken cautiously. Nor do they shed any light on the etiology of the syndrome.

Windebank reported these preliminary results at the annual meeting of the American Academy of Physical Medicine and Rehabilitation in Washington, DC.

Postpolio Problems

The Mayo Clinic study was started by Mary B. Codd, MD, in response to widespread interest in physical difficulties that former patients with paralytic poliomyelitis were experiencing. Codd studied the medical records of every patient in Olmstead County, Minnesota, who had polio between 1935 and 1960, finding 608 cases of confirmed poliomyelitis, 300 of them paralytic. Of those paralytic cases, 247 persons survive.

To make the proposed long-term study manageable, the Mayo investigators selected 50 survivors. To ensure these 50 individuals fairly represented the entire group, the May investigators looked at as many different characteristics as they could think of, says Windebank.

Among characteristics reviewed were the extent of the original disability, neurologic deficit, and distribution and extent of muscle weakness. "We believe these 50 individuals are a fair representation of the group as a whole," Windebank says.

Extensive Workup

Five years ago, the Mayo investigators gave these survivors a thorough workup, which involved answering an extensive questionnaire, neurologic examinations, detailed electrophysiologic and pulmonary function studies, isometric strength measurements, and a variety of other functional tests. They found that 32 patients (64%) had the symptoms associated with postpolio syndrome.

In about 10 patients (20%), these symptoms had led to some changes in the activities of daily living, ranging from such minor things as requiring assistance while in the bathroom to, in two instances, being forced to stop work.

Now this initial examination is being repeated. So far, 22 persons have been examined but analyses have only been completed on the first 10.

"We have found," Windebank says, "that while the number of complaints by the subjects has increased, the neurologic disability score has not. In fact, on manual muscle testing, the

subjects have slightly less, although not significantly less, disability than they had 5 years ago."

Slight Changes

So, he says, while there was subjective evidence of deterioration, this was not reflected by objective measurement.

There was a slight decrease in motor unit potentials in muscles over this 5-year period, he says, adding: "But it's not different from a group of age-matched controls. So, these first 10 persons aren't losing motor unit potentials any faster than healthy individuals."

The subjects' isometric strength has fallen slightly. But when Windebank and his associates compared the weakened limbs of the postpolio subjects with controls with normal limbs, "The small changes we see are identical in both the weak and normal limbs."

More Vulnerable

While any deterioration is bound to have a greater impact on already weakened limbs than on normal limbs, the changes that have occurred over the 5 year period are proportionately the same, Windebank says.

"The normal limb went from 100% to 90% of measured strength," he says. "The weak limb started off at 50% and went down to 45%."

So, says Windebank, it appears that "if we ask ourselves: Have the weak limbs lost any more strength than they had 5 years before? The answer is they haven't."

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