Study Using Modafinil to Treat Fatigue

Olavo M. Vasconcelos, MD, Uniformed Services University of Health Sciences, Bethesda, Maryland, ovasconcelos@usuhs.mil

Post-polio fatigue is not simply muscular or physical. It involves emotional, intellectual, social and other related functioning.

Modafinil (Provigil®) has been successful in treating fatigue in patients with other neurological disorders, including multiple sclerosis.

First Study: The PPS program sponsored by the Uniformed Services University enrolled (June 2005) volunteer polio survivors to test if modafinil can reduce fatigue in polio survivors experiencing PPS. The results of this randomized controlled trial showed that modafinil was not superior to placebo in alleviating the fatigue.

Second Study: The program has enrolled polio survivors to look at alterations in their brains and spinal cords in order to explain the development and the origin of PPS symptoms. This is not a drug treatment trial. Electrophysiology and magnetic resonance will be used to map possible residual abnormalities in the central nervous system caused by the poliovirus during the original infection.

Third Study: We also will look at cognitive problems that are common among polio survivors who have PPS. The study will measure the brain’s ability to concentrate, sustain attention, register and memorize information with the use of traditional neuropsychological tests. Recruitment for this study is expected to start in May of 2006. Polio survivors with and without PPS are needed for this study. Any polio survivor is welcome to enroll, but funding is not available for transportation to the site.

Understanding Research

After every international conference, PHI is asked, “What’s the latest research?” Thanks to polio survivor Baldwin Keenan, this issue features the summaries of four presentations (pp. 4-7). Three of the researchers discussed pharmacological possibilities—modafinil, GDNF and IGF-1 and intravenous immunoglobulin (IvIg). The next question is, “Should I, as a polio survivor, try it?”

The findings in the modafinil study were that it did not alleviate fatigue, which is the same conclusion as that of a team of researchers from the University of Alberta, Canada. K.M. Chan and colleagues reported their study in the January 2006 Muscle & Nerve [33(1):138-41].

GDNF and IGF-1 are just now being tested on mice. There is no decision to be made.

By all accounts, intravenous immunoglobulin (IvIg) sounds promising. But, there are many questions. Is the research “good” research? Which polio survivors would it benefit? All of us? A select few? What are the side-effects? These and other questions will be answered in the next issue of Post-Polio Health by Lauro S. Halstead, MD, National Rehabilitation Hospital, Washington, DC, and Julie K. Silver, MD, International Rehabilitation Center for Polio, Framingham, Massachusetts.