Research Provides More Evidence That Chronic Fatigue Syndrome is a Legitimate Medical Condition
Syndrome Linked to Neurological Abnormalities

Researchers at Georgetown University Medical Center have found that chronic fatigue syndrome (CFS) may be rooted in distinct neurological abnormalities that can be medically tested. Although the sample studied was small, this research provides objective, physiological evidence that the controversial disorder can be considered a legitimate medical condition.

Chronic fatigue syndrome defines a range of illnesses including fibromyalgia and Gulf War syndrome, all of which have fatigue as a major symptom. Even among medical professionals, disagreement exists about the causes, diagnosis, and treatment of CFS because so much about the disorder remains unknown.

One reason CFS is difficult to diagnose is because it shares symptoms with many other diseases, including multiple sclerosis and lupus. Even when other illnesses are ruled out and a CFS diagnosis is given, there is not a standardized course of treatment, and it's difficult for doctors to measure patient improvement. Estimates are that two to four times as many women as men are diagnosed with CFS.

The Georgetown study, published in the November edition of the BMC Neurology Journal, an online publication, reveals that patients diagnosed with CFS and its family of illnesses have a set of proteins in their spinal cord fluid that were not detected in healthy individuals. These proteins might give insight into the causes of CFS and could someday be used as markers to diagnose patients with the disorder.

"For years, patients with chronic fatigue syndrome have suffered from painful symptoms for which there is no blood test, diagnosable physical condition, or any method for doctors to measure improvement," said James Baraniuk, MD, assistant professor of medicine at Georgetown University Medical Center and first author on the study. "Our research provides initial evidence that chronic fatigue syndrome and its family of illnesses may be legitimate neurological diseases and that at least part of the pathology involves the central nervous system."

The disorder is characterized by profound fatigue that is not improved by bed rest and that may get worse with physical or mental activity, according to the Centers for Disease Control and Prevention. Persons with CFS usually function at a lower level of activity than they were capable of before the onset of illness, feeling too tired to perform normal activities or easily exhausted for no apparent reason. Patients also report various nonspecific symptoms, including weakness, muscle pain, impaired memory and/or mental concentration, insomnia, and post-exertional fatigue lasting more than 24 hours.

The study looked at 50 individuals suffering from at least two disorders related to CFS, including fibromyalgia and Gulf War syndrome. By examining spinal cord fluid in patients with CFS and in healthy individuals, the researchers found that CFS patients have 16 proteins that healthy individuals do not. Five of these 16 proteins are found in all patients with the illnesses but in none of the controls. The results indicate that those 16 proteins could possibly serve as a "biosignature" for the disease and could someday be used to diagnose CFS.

"Although this is a small study and more research on the subject is necessary, these results indicate it might be possible to develop a simple laboratory test to diagnose these disorders in the future," Baraniuk said.

Other co-authors on the paper include Begona Casada, PhD, and Hilda Maihach, MS, of Georgetown University Medical Center; Daniel J. Clauw, MD, of the University of Michigan; Lewis K. Pannell, PhD, of the University of South Carolina; and Sonya Hess, PhD, of the National Institute of Diabetes and Digestive and Kidney Diseases.

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