

SOUTHWESTERN NEWS

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EMBARGOED UNTIL 3 P.M. CDT MONDAY, SEPT. 8, 2003

ADVANCES IN MRI IMAGING MAY LEAD TO NEW STANDARDS FOR FASTER DIAGNOSIS OF MULTIPLE SCLEROSIS

DALLAS – Sept. 9, 2003 – The notoriously long and arduous process of diagnosing multiple sclerosis may soon be simplified, a researcher at UT Southwestern Medical Center at Dallas has reported.

In a paper published in today's issue of *Neurology*, Dr. Elliott Frohman and his colleagues said data suggest that advanced applications of magnetic resonance imaging (MRI) scans can be used in concert with clinical observations to diagnose the complex neurological disorder more quickly.

"This assessment provides compelling evidence that in the majority of patients with a first MS-like attack, the presence of characteristic MRI lesions within the central nervous system strongly predicts future conversion to clinically definite MS," said Dr. Elliot Frohman, lead author of the paper and head of UT Southwestern's multiple sclerosis program.

Evidence of white matter abnormalities detected in different regions of the brain on a sophisticated MRI scan, when considered in concert with clinical indications of the disease, may effectively replace diagnostic methods that have typically required months or even years of clinical observation, said Dr. Frohman, associate professor of neurology and ophthalmology.

Until recently, conclusive diagnosis of multiple sclerosis has required lengthy clinical observation of the complex grouping of symptoms, including signs of the disease in different parts of the nervous system and instances of at least two separate flare-ups of symptoms occurring at least one month apart.

But new imaging technology produces MRI scans that depict white matter abnormalities in such a way that they provide doctors definitive evidence that the injuries occurred over time, eliminating the need for time-separated clinical observation.

(MORE)

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Using this new method, diagnosis can be confirmed as early as a patient's first clinical attack, said Dr. Frohman. For patients, this simpler method could mean quicker access to therapies that can help keep devastating symptoms of the disease at bay for many years.

Multiple sclerosis is the most common disabling disease of young people, ages 18 to 45, and affects 350,000 people in the United States. Symptoms of the disease are unpredictable, vary by individual and often come and go. While one patient may experience severe vision problems, another may have abnormal fatigue. Other symptoms include loss of balance and muscle coordination, slurred speech, tremors, stiffness, and bladder problems.

A fatty tissue called myelin surrounds the central nervous system and protects nerve fibers, helping them conduct electrical impulses. During the progression of MS, myelin is lost in multiple areas, leaving scar tissue called sclerosis. Sometimes the nerve fiber itself is damaged or broken. In either case, the ability of the nerves to conduct electrical impulses to and from the brain is disrupted, producing various symptoms of the disease.

This study was supported by the American Academy of Neurology.

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