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## **Update on MS in Clinical Practice**

by Anne Lambert, MS

Multiple sclerosis (MS) affects 400,000 Americans and is the leading nontraumatic cause of neurological disability in young adults.<sup>1</sup> Relapsing-remitting MS (RRMS) is by far the most common presentation, affecting 85% of patients early in the disease course.<sup>2</sup> Patients with RRMS experience symptomatic periods interspersed with periods of symptom reduction or remission. During symptomatic periods, old symptoms can worsen and/or new symptoms can emerge. Relapses can last for varying amounts of time from days to months, and recovery can be gradual or rapid. If not treated, patients with RRMS can transition to secondary progressive MS, which is characterized by a more pronounced decline. Even with treatment, about half of patients with RRMS will deteriorate to the secondary progressive form within 10 years of disease onset. Although MS is progressive, it is not fatal, and patients generally have a normal lifespan. However, progressive disability imposes increasing limitations and reduced quality of life for these patients. Consequently, the importance of symptomatic therapy, disease-modifying medications, and psychosocial support cannot be underestimated.

Early identification, particularly in the context of primary care, can be challenging because MS has a variety of possible presentations, such as infectious disease, cancer, vascular disease, as well as a number of non-MS neurological illnesses.<sup>3</sup> Early intervention requires that visual disturbances, weakness, loss of balance, extreme fatigue, and motor skill dysfunction be recognized as indicators for prompt referral to a neurologist. Even in the context of a neurology practice, MS can be misdiagnosed because of the same list of possible differential diagnoses confronting a PCP, and because it is a clinical diagnosis with no one confirmatory diagnostic test.<sup>3</sup> Diagnosis of MS is based on the McDonald criteria put in place in 2001<sup>4</sup> and then revised in 2005.<sup>5</sup> These criteria have resulted in improved sensitivity and specificity of diagnosis and have facilitated earlier recognition and treatment to favorably alter long-term outcome. The recent revisions to the diagnostic criteria, coupled with an extensive update of consensus recommendations on differential diagnosis, should allow for an earlier and more accurate diagnosis of MS, and consequently the best possible care and outcome. Robert P. Lisak, MD, from Wayne State University in Detroit, Michigan, Chair of the American Neurological Association's public information committee, states: "The ability to make the diagnosis of multiple sclerosis early and accurately is important for both patient care and for clinical research including clinical trials of new treatments."

Once a diagnosis of MS is confirmed, neurologists must act to effectively treat, manage, and support the MS patient. There is no cure for MS; however, use of appropriate treatments at the time of diagnosis can protect patients against some of the impact of the disease and its long-term evolution. Interferon beta-1a, interferon beta-1b, glatiramer acetate, mitoxantrone, and natalizumab are the current FDA-approved treatments for MS and can reduce the frequency and severity of relapses, reduce the accumulation of brain and spinal cord lesions as observed on MRI, and may delay the accumulation of disabilities. A number of factors must be considered when selecting a treatment regimen for a patient with MS, including variations in clinical and MRI evidence of disease, extent of disability, and psychosocial factors that impact upon ability to adhere to treatment, quality of life, and function. Patient preference is important as well, and physicians should take the time to educate their patients about the efficacy and side effects of available medications.

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An integral part of treatment for patients with MS is the coordination of care across a variety of providers that can address their comprehensive needs. This is especially important given the results of one study showing that more disabled MS patients saw their PCP more often than less disabled patients, and another showing that only half of patients with MS regularly see a neurologist.<sup>6,7</sup> A treatment team including neurologists, PCPs, nurses, physical and occupational therapists, ophthalmologists, urologists, and others is required to manage the whole patient with MS. The Corinne Goldsmith Dickinson Center for Multiple Sclerosis at The Mount Sinai Medical Center has announced a cutting-edge program to provide psychiatric care for patients with MS. An on-site psychiatrist, also trained in MS, will assist in identifying and managing psychological and psychiatric disorders. "This is a major advance for patients with MS because many are dealing with psychological disorders as well as their disease," said Dr. Fred D. Lublin, Director of Corinne Goldsmith Dickinson Center for Multiple Sclerosis at Mount Sinai. "The goal here is also to increase education and improve awareness that MS patients are dealing with psychological issues that need special attention."<sup>8</sup>

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**References**

- 1 Bermel RA, Rudick RA. Interferon-based treatment for multiple sclerosis. *Neurotherapeutics* 2007;4:633-646.
- 2 Courtney AM, Treadaway K, Remington G, Frohman E. Multiple sclerosis. *Med Clin N Am* 2009;93:451-476.
- 3 Miller DH, Weinshenker BG, Filippi M, et al. Differential diagnosis of suspected multiple sclerosis: a consensus approach. *Mult Scler* 2008;14: 1157-1174.
- 4 McDonald WI, Compston A, Edan G, et al. Recommended diagnostic criteria for multiple sclerosis: guidelines from the International Panel on the diagnosis of multiple sclerosis. *Ann Neurol* 2001;50:121-127.
- 5 Polman CH, Wolinsky JS, Reingold SC. Multiple sclerosis diagnostic criteria: three years later. *Mult Scler* 2005;11:5-12.
- 6 MacLurg K, Reilly P, Hawkins S, Gray O, Eavson E, Whittington D. A primary care-based needs assessment of people with multiple sclerosis. *Br J Gen Pract* 2005;55:385-390.
- 7 Somerset M, Campbell R, Sharp DJ, Peters TJ. What do people with MS want and expect from health-care services? *Health Expect* 2001;4:29-37.
- 8 Mt. Sinai News. February 26, 2009. Available at: <http://www.mountsinai.org/?citytype=News&ciid=02262009>.