

Medical Update Memo

January 24, 2006

BC researchers find disability progression in MS is slower than previously reported

SUMMARY

Researchers at the University of British Columbia have found that disability progression in multiple sclerosis takes place more slowly than reported in earlier studies. They also reported that being male or being older at disease onset are not associated with a worse disease outcome, challenging other fundamental concepts about MS. The study, which was funded in part by the MS Society of Canada, appeared in the January 2006 issue of *Neurology*.

DETAILS

Determining how multiple sclerosis might progress following its onset is difficult. To tackle the issue scientifically, researchers undertake studies of large populations of people with MS in what are known as natural history studies. For this study at the University of British Columbia, Dr. Helen Tremlett, Dr. Donald Paty and Dr. Virginia Devonshire used the database from the four MS clinics in British Columbia to ascertain a study population of people with definite MS and symptom onset prior to July 1988. They looked at two different inception points - clinical onset and date of birth.

This methodology enabled them to find a group of 2,837 individuals who fulfilled the study criteria. Slightly over 70 percent were female, 88 percent initially had a relapsing course, the mean age at onset was slightly over 30 years old and for 40 percent their symptoms at onset were sensory in nature. On average, the individuals in this group had their disability score measured every 1.1 years.

As reported in the January 2006 issue of *Neurology*, lead investigator Dr. Tremlett and colleagues found that the British Columbia MS population took a median 27.9 years to reach EDSS 6, which was substantially longer than the 15 years found in an earlier London, Ontario

study. The researchers in both studies used the internationally recognized Expanded Disability Status Scale (EDSS), which is a method of quantifying disability using a scale from 0 to 10. At EDSS 6, an individual would require a cane to walk.

By using date of birth as an inception point, the researchers were also able to challenge two other concepts widely believed about MS: that male sex and older age at onset are associated with more rapid progression to disability. The UBC study confirmed that while men progressed more rapidly from onset than women, it also showed that both men and women require a cane for mobility at about the same age. The researchers concluded that female sex conveys little benefit in that women are more likely to develop MS and at a younger age, but that irreversible disability developed at a similar age to men.

In terms of developing MS later in life, Dr. Tremlett reported the study found an older age at onset did not necessarily lead to a "gloomy" outlook. Not only did those older at onset have a longer disease-free period (prior to the development of MS), but they required a cane at an older age than people who were younger at disease onset. On average, someone with disease onset in his/her 20s required a cane at age 55. This same level of disability was reached at age 71 for those diagnosed at age 50 and older.

"By examining absolute age when this level of disability occurs (requiring a cane for mobility), we have a better understanding of the natural course of MS," Dr. Tremlett noted. Dr. Tremlett holds a Dr. Donald Paty Career Development Award from the MS Society of Canada. The study was funded in part by the MS Society.

"Natural history studies like this are vital. Information gleaned from them can help guide prognosis and facilitate decisions regarding initiation of drug therapies," added Dr. William J. McIlroy, MS Society national medical advisor.

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