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Missed Opportunities in Multiple Sclerosis Care: Increasing HCP Awareness of Early Diagnostic Delays

Announcer:

Welcome to CME on ReachMD. This episode is part of our MinuteCE curriculum.

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Dr. Weinstock-Guttman:

I'm Bianca Weinstock-Guttman, and I'm a Professor of Neurology at Jacobs School of Medicine and Biomedical Sciences in Buffalo, New York, and we'll talk today about early diagnosis in multiple sclerosis and the importance to relation to initiation of disease-modifying therapy.

So why is an early diagnosis important? Early diagnosis and initiation of treatment have the potential to slow the course of MS over time. As you can see in this graph, there is a delay on disease progression and early diagnosis with early treatment versus later diagnosis and treatment, and clearly much better than the natural course of MS without treatment.

Revision to the MS diagnosis criteria over the past 2 decades has facilitated an earlier diagnosis by including MRI benchmarks, and most recently, the inclusion of oligoclonal bands in spinal fluid to support the essential features of MS diagnosis: dissemination in space and time.

In a recently evaluated cohort of 785 persons with MS from 9 European centers, the median time to diagnosis was almost 60 months when based on waiting for a second clinical event, versus only 13 months based on the 2010 McDonald criteria, and 3 months only based on the newer 2017 McDonald criteria. Earlier diagnosis consequently has resulted in earlier treatment, even based on differences between 2010 and 2017 criteria, which is associated with improved clinical outcomes for people with MS.

A Swedish study evaluated 639 patients diagnosed with MS from 2001 to 2007, with a follow-up time that was around 8 years. In the Cox regression models that was applied to this cohort to try to identify factors correlated with the outcome variables and primarily looking for an irreversible score of 4 on the Expanded Disability Status Scale, means patients with damage, irreversible neurological damage, but still able to walk about 500 meters. And the result of the study suggested the patients initiated on treatment later had a greater risk of reaching EDSS of 4. This risk increased by 7.4% for every year of delay in treatment. Patients who started treatment after 3 years from MS onset reached the outcome much earlier compared with patients that were started on treatment within 1 year. Baseline EDSS and age at onset were also found to be predictive factors of disability progression. So, in conclusion, early treatment initiation was associated with better clinical outcomes. In addition, the study confirmed the well-established prognostic factors of late age of onset and early disability.

Another study retrospectively by weighting the Danish registry compared the outcome between patients started early on DMT within first 2 years versus the ones over 2 years. Patients who started treatment with DMT later reached an EDSS score of 6, meaning requiring a cane on ambulation, more quickly, or almost 42% increase in hazard ratio, compared with patients who started earlier. And the delay in treatment initiation showed a tendency to shorten the time to death. So, mortality was actually increased by 38% in the group that initiated treatment later.

In addition, a more recent study evaluated the association of receiving very early treatment with the risk of long disability, including also the MRI data. The MRI data was included in the MR score, which was 1 to 5 based on number of lesions, location, presence of gad-enhancing lesions in a patient with a first demyelinating event on clinical syndrome. Comparison between three groups were done; patients treated within 6 months, between 6 and 16 months, and over 16 months. A very early treatment decreased the risk of reaching EDSS of 3, decreased the risk to converting to secondary progressive MS, as well as decreased in sustained disease progression at 12 months after treatment initiation when compared with a patient from the delayed treatment group. Patients from the first group had a low disability progression to, lower severe disability measured by the Patient-Determined Disease Step, than those from the third group. So, treatment initiation at very early stages, even after the first clinical event, was associated with a reduction in the risk of long-term disability accrual.

So, in conclusion, the new McDonald criteria provide an earlier diagnosis of multiple sclerosis. Earlier diagnosis offers the opportunity to initiate earlier treatment. Earlier therapy initiation delays long-term progression. And following the specific criteria recommendation is actually very important to prevent misdiagnosis.

Thank you very much for listening.

Announcer:

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