(S82) DO CLINICAL FACTORS IMPROVE APPLICATION OF THE MULTIPLE SCLEROSIS SEVERITY SCORE TO INDIVIDUAL PATIENTS?
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Background: Physicians typically advise patients that the multiple sclerosis (MS) course is too variable to allow prediction for individuals. The Multiple Sclerosis Severity Score (MSSS), by combining the Expanded Disability Status Scale (EDSS) and disease duration, divides patient groups into prognostic deciles. Its developers contend that it cannot be used to predict disability in individuals. We assessed the impact of initial MSSS when combined with established prognostic factors on long-term outcome in individual patients. Objectives: To assess whether the prognostic value of the MSSS for individual patients is improved when combined with clinical factors. Methods: Patients followed by a single physician (AM) were assigned an MSSS at approximately annual visits. All patients seen in 2008 who had been followed for at least 8 years (mean, 12.1 years; range, 8–26 years) were included (n = 122). Charts were systematically reviewed, and MSSS and EDSS at initial and final evaluation were analyzed. We examined the likelihood of a patient remaining within 1 point on the MSSS scale. Stepwise logistic regression was used to evaluate the impact of prognostic factors. Results: At final evaluation, 44.3% remained within 1 point of their initial MSSS; 33.6% were in a lower decile (improved); and 22.1% were in a higher decile (worsened). Patients deviated up to 5.6 deciles better or worse than their initial MSSS. Sex, age at onset, functional system affected at onset (visual, brainstem, pyramidal, cerebellar, sensory, bowel/bladder, or cerebral), and degree of recovery from initial attack were evaluated to assess whether these factors predicted which patients varied by more than 1 decile from initial MSSS. None of the variables, individually or in combination, identified who had a better or worse prognosis than predicted by their initial MSSS. Conclusions: The MSSS calculated at initial presentation is a modestly accurate predictor of disease course, although a majority of patients did not remain in their expected decile at a mean of 12 years’ follow-up. Furthermore, taking into account established prognostic factors did not identify which patients had a better or worse prognosis than their initial MSSS decile. This counterintuitive result suggests that there is either too much stochastic variability or too many heretofore-unidentified prognostic variables to allow for precise application of the MSSS at the individual patient level.


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