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SPMS diagnosis: a Canadian practice audit

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Introduction: An estimated 50% of relapsing-remitting multiple sclerosis (RRMS) patients develop secondary-progressive disease (SPMS) within 15-20 years of MS onset; average age at onset is 45 years (Tremlett 2008,Tutuncu 2013). The lack of consensus on diagnostic criteria contributes to clinician uncertainty and a considerable diagnostic delay (Katz Sand 2014).
Objectives: To examine the clinical characteristics of potentially transitioning RRMS and SPMS populations in the Canadian practice setting.
Methods: A retrospective chart review was completed in Canadian MS specialized centres and community neurology practices of MS patients with EDSS 3.0-6.5 who received an RRMS diagnosis 10-20 years ago.
Results: Data were collected for 708 patients at 15 centres (59% from 10 MS clinics, 41% from 6 community practices). A majority were aged >50 years (58%). The average duration of MS was 15.2 years (range 13.3-17.1 years). The SPMS group (n=223) was older (76% aged >50 years vs. 49%), had a higher current Expanded Disability Status Scale (EDSS) score (mean 5.6 vs. 3.9) and a longer time from MS diagnosis (mean 16.1 vs. 14.7 years) compared to the RRMS group (n=485). Clinical and radiological disease activity in the preceding two years were similar in both groups. The proportion of RRMS vs. SPMS patients with relapses (22% vs. 16%) and new/expanding magnetic resonance imaging (MRI) lesions (27% vs. 30%) was also similar. A higher proportion of SPMS vs. RRMS patients had not undergone MRI within the past 2 years (19% vs. 6%).
Records were examined for the incidence of three MS-related symptoms. A higher proportion of SPMS patients had bladder dysfunction/urinary incontinence (84% vs. 43%), sexual dysfunction (29% vs. 12%) and signs of cognitive impairment (49% vs. 26%) compared to the RRMS group.
A majority of SPMS patients (119/223, 53%) were not receiving a disease-modifying therapy (DMT). The most common DMTs were oral agents (29%) and first-line injectables (9%). In contrast, 84% of RRMS patients were currently on treatment. The most common DMTs were oral agents (40%) and monoclonal antibodies (28%).
Conclusions: SPMS is generally diagnosed about 16 years after MS onset when patients are aged >50 years and already have moderate-to-severe disability. The above data could not determine if an SPMS diagnosis is delayed. Improved detection of worsening symptoms may enable earlier diagnosis of SPMS in younger patients before the onset of irreversible disability.
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