Longitudinal study of symptom botheration in Multiple Sclerosis patients
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Objective: 1. To report on longitudinal changes in SymptoMScreen scores in MS patients followed in two large, multi-ethnic MS centers; 2. To investigate the relationship between changes in SymptoMScreen and disability scores.

Background: Little is known about longitudinal changes in symptom impact in MS patients. SymptoMScreen is a validated, patient-reported outcome measure for assessing symptom severity in 12 domains commonly affected by MS: walking, dexterity, spasticity, bodily pain, sensory, bladder, fatigue, vision, dizziness, cognitive, depression and anxiety (Green et al, 2016).

Design/Methods: SymptoMScreen and disability score (Patient-Determined Disability Steps, PDDS) were collected on consecutive MS patients attending NYU (New York City, NY) and Barnabas (Livingston, NJ) MS Centers. We retroactively analyzed responses in all MS patients, who fully completed 2 SymptoMScreen and PDDS questionnaires over a period of 12 months or more.

Results: 594 MS patients satisfied the inclusion criteria. Mean age was 44.4 (12.3); disease duration - 11.3 (9.1); 72.6% were female and 39.6% were non-White. Follow-up period was 16.7 (3.7) months. Mean total SymptoMScreen score increased from 17.3 at baseline to 18.1 at the last follow-up (paired t-test, p=0.03). Among SymptoMScreen subscores, significant increases were seen only in bladder (p<0.001), hand (p=0.04) and dizziness (p=0.05) domains. Mean (PDDS) increased from 1.8 at baseline to 2.0 at the last follow-up (p>0.05). In a multivariable ordinal regression model with change in PDDS as an outcome variable and age, sex, race and SymptoMScreen change as predictor variables, only SymptoMScreen change was a predictor of change in PDDS (correlation coefficient of 0.28).

Conclusions: Overall symptoms botheration, as assessed with SymptoMScore, has increased slightly but significantly over a period of ~17 months, driven mainly by increases in bladder, dexterity and dizziness domains. Disability (PDDS) increased non-significantly. Change in SymptoMScreen was the only significant predictor of change in disability score in the multivariate model.