Introduction

- Approximately 34%-65% of people living with multiple sclerosis (plwMS) develop cognitive impairment (CI). CI can occur from the early stages of MS, although it is more common in secondary progressive multiple sclerosis (SPMS). CI has a negative impact on quality of life for plwMS.
- CI often encompasses different domains such as information processing speed, memory problems, difficulty concentrating, and problems using executive functions effectively.
- Cognitive status relates to working ability of plwMS and may be predictive of a more severe disease course and disability progression.
- CI is not routinely assessed in clinical consultations, and therefore can remain undetected.

Objective

- This study explores the level of agreement on the perception of the presence of CI between plwMS and neurologists.

Methods

- Retrospective cross-sectional analysis of data from neurologists and plwMS from the US, UK and EU (France, Germany, Italy and Spain) from the 2011-2019 Adelphi Multiple Sclerosis Disease Specific Programme (MS-DSP).
- The Adelphi MS-DSP is a study based in the real-world clinical setting which describes MS management, burden and associated impacts.
- Participating neurologists provide data on the next 10 plwMS to have a consultation, patient record form (PRF), with the same plwMS invited to voluntarily complete a patient self-completion form (PSC).
- Both plwMS and neurologists were asked about the presence of problems concentrating around the time of consultation (two weeks prior, or at the consultation, respectively).
- Kappa analysis was used to calculate the level of agreement between neurologists and plwMS.

Results

- Surveyed neurologists provided data for 25,374 plwMS, of which 11,220 completed a PSC. Of the 11,220 plwMS with a PSC 4,817 provided information on cognitive and mood symptoms.
- The majority of plwMS were female (67%) with an average age of 38.9 yrs for relapsing-remitting MS (RRMS) and 49.4 yrs for SPMS.

Table 1. PlwMS characteristics

<table>
<thead>
<tr>
<th>M5 patients (n=4817)</th>
<th>Age</th>
<th>Gender</th>
<th>RRMS (n=4320)</th>
<th>SPMS (n=497)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>40.0 (SD 11.77)</td>
<td>67% Female 33% Male</td>
<td>38.9 (SD 11.52)</td>
<td>49.4 (SD 9.49)</td>
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<tr>
<td></td>
<td>67% Female 33% Male</td>
<td>64% Female 36% Male</td>
<td>53%</td>
<td>21%</td>
</tr>
<tr>
<td></td>
<td>Workig full time</td>
<td>Working part time</td>
<td>14%</td>
<td>15%</td>
</tr>
<tr>
<td></td>
<td>Student</td>
<td>8%</td>
<td>0%</td>
<td></td>
</tr>
</tbody>
</table>

- Fewer SPMS patients were in full/part time employment (36% vs 67%) vs RRMS.
- 59% reporting having problems concentrating, and 68% reporting feeling mentally fatigued.

Figure 1. Proportion of RRMS and SPMS participants reporting cognitive and mood symptoms

- A higher percentage of SPMS participants reported suffering from cognitive or mood symptoms compared to RRMS participants (Figure 1).
- A higher percentage of SPMS participants reported moderate or extreme cognitive and mood symptoms compared to RRMS participants (Figure 2).
- 62% of plwMS reported problems concentrating in the past two weeks. For the same plwMS, neurologists reported 27% currently having problems concentrating (Figure 3), showing a discordance on the perception of the presence of CI between neurologists and plwMS (Kappa=0.162).

Figure 2. Proportion of RRMS and SPMS participants reporting cognitive and mood symptoms classified by severity

- A large proportion of plwMS reported cognitive and mood symptoms, participants with SPMS reporting these symptoms with higher frequency and severity.
- A clear discordance is observed between neurologists and plwMS when reporting their perception of the presence and severity of CI with neurologists underestimating their existence.
- This might be responsible for cognition not being discussed at the time of consultation and clearly indicates an unmet need.

Figure 3. Proportion of physicians and plwMS reporting problems

Conclusion

- A large proportion of plwMS reported cognitive and mood symptoms, participants with SPMS reporting these symptoms with higher frequency and severity.
- A clear discordance is observed between neurologists and plwMS when reporting their perception of the presence and severity of CI with neurologists underestimating their existence.
- This might be responsible for cognition not being discussed at the time of consultation and clearly indicates an unmet need.

References


Disclosures

I-L. Panter has received fees for speaking at scientific meetings, serving as scientific advisory boards and consulting activities from Adamas Pharma, Amhrid, Bayer Pharma, Biogen, CMS, Celgene, Desitin, Genzyme, Janssen, Merck, Novartis, Roche and Teva. She has received research support from the German MS Society, Celgene, Novartis, Roche and Teva. Eddie Jones is an employee of Adelphi Real World and his organisation has received a subscription fee from Novartis to access some of the data reported in this study. Suzannah Ryan, Patricia Dominguez Castro, Vladimir Bzalyak, Daniela Plani-Meier, Virginia de las Heras, and Carol Lines are employees of Novartis. The final responsibility for the content lies with the authors. This study was funded by Novartis Pharma AG.