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Age at onset correlate with disability in Latin American aquaporin-4-IgG-positive NMOSD patients

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We would like to thank Dr Delgado-García et al. (Delgado-Garcíaa et al., 2020) for their valuable comments. The authors have provided an interesting description of their experience on aquaporin-4-IgG-positive late-onset neuromyelitis optica spectrum disorders (NMOSD) patients in Mexico. Late-onset NMOSD patients are defined as those with an age at onset of first symptoms of 50 years or older (Delgado-Garcíaa et al., 2020, Carnero Contentti et al., 2020, Collongues et al., 2014, Fragoso et al., 2019, Sepulveda et al., 2019, Seok et al., 2017). Although late-onset NMOSD is uncommon, it has been reported that these patients have worse prognosis because of greater severity of symptoms, worse recovery from relapses, and higher frequency of spinal cord lesions, despite early aggressive immunotherapy (Delgado-Garcíaa et al., 2020, Carnero Contentti et al., 2020, Collongues et al., 2014, Fragoso et al., 2019, Sepulveda et al., 2019, Seok et al., 2017).

Dr Delgado-García et al. (Delgado-Garcíaa et al., 2020) have commented that they read with great interest our research recently published on a cohort (n = 140) of Latin American (Brazil, Venezuela and Argentina) patients with late-onset NMOSD with different aquaporin-4-IgG antibody serostatus (Carnero Contentti et al., 2020). In addition, they described that in their cohort (n = 58) no statistically significant correlation between age of onset and Expanded Disability Status Scale (EDSS) score at last follow-up was observed (Delgado-Garcíaa et al., 2020). They also commented that: "this subanalysis was not reported by Carnero Contentti et al., 2020". In our entire cohort, we observed a positive correlation between age at onset and EDSS score at the last follow-up (Spearman $r = 0.34$, $p < 0.0001$). However, as mentioned by colleagues from Mexico, in that publication we did not evaluate the subpopulation of aquaporin-4-IgG-positive NMOSD patients, and aquaporin-4-IgG-negative NMOSD patients were not tested for anti-myelin glycoprotein auto-antibodies because this test is not available in all centers from Latin America. Therefore, we reviewed our cohort focusing on aquaporin-4-IgG-positive NMOSD patients (n = 89) and found a positive correlation between age at onset and EDSS score at the last follow-up in aquaporin-4-IgG-positive NMOSD patients (Spearman $r = 0.28$, $p = 0.007$; Fig. 1), in line with previous reports (Collongues et al., 2014, Fragoso et al., 2019, Sepulveda et al., 2019).

This finding supports the hypothesis that age at onset have important implications for the long-term prognosis for aquaporin-4-IgG-positive NMOSD patients.

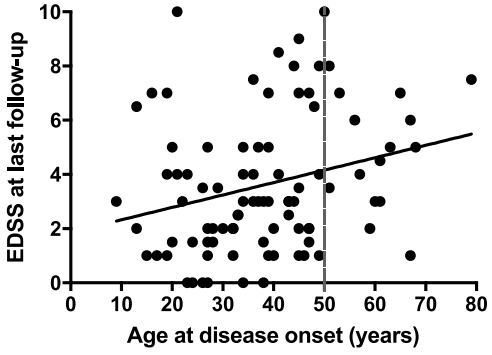

Fig. 1. Correlation between age at disease onset and disability in AQP4-ab-positive NMOSD patients
Spearman r = 0.2837, 95% confidence interval 0,07400 to 0,4694, p = 0.0071.

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Declaration of Competing Interest

None of the authors have any potential financial conflict of interest relating to this manuscript.

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