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Obesity negatively affects disease progression, cognitive functioning, and quality of life in people with multiple sclerosis

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Introduction:

Obesity increases the risk of multiple sclerosis (MS), but studies investigating the potential influence of obesity on MS disease progression have been inconclusive.

Objectives/Aims:

We aimed to study the influence of body mass index (BMI) on disease progression, cognitive performance, and health-related quality of life in patients with MS.

Methods:

Patients from an incident population-based case-control study were categorized based on BMI status at diagnosis and were followed up to 5 years post-diagnosis through the Swedish MS registry regarding changes in Expanded Disability Status Scale (EDSS), Multiple Sclerosis Impact Scale 29, and Symbol Digit Modalities Test. Linear mixed models were used to analyse long-term changes, and Cox regression models to analyse risk of 24-week confirmed disability worsening, time to EDSS 3 and EDSS 4, patient-reported physical and psychological worsening and processing speed worsening.

Results:

We followed up 3249 individuals with MS, of which 74% were females. Mean age at baseline was 37.8 years. Compared to normal weight, obesity was associated with a 0.022-point faster annual increase in EDSS score (β for EDSS x time 0.022, 95% CI 0.003-0.041). Obesity was also associated with an increased risk of reaching EDSS 3 (HR 1.43, 95% CI 1.17-1.75) and EDSS 4 (HR 1.33, 95% CI 1.05-1.70) and with an increased risk of physical and psychological worsening. Among participants who had not changed BMI group during follow-up, the HR of cognitive disability worsening was 1.47 (95% CI 1.08-2.01) among obese participants, compared to those without obesity.

Conclusion:

Obesity in participants with MS was associated with faster disease progression, worse health-related quality of life, and faster worsening of cognitive disability.

Disclosures:

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