Correlates of daytime sleepiness and fatigue in a prospectively followed cohort of patients with myotonic dystrophy type 1

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Abstract:

Introduction. Daytime sleepiness and fatigue are two prominent symptoms of DM1 but little is known about their progression over time when controlling for individual factors.

Methods. At a 9-year interval, 200 and 115 patients respectively participated to Time 1 and Time 2 (T1, T2). Mixed-effect models were used to take into account repeated measures within a single linear regression model to identify correlated factors of daytime sleepiness and fatigue. Gender, age, BMI, IQ, CTG repeat number, degree of muscular impairment, physical pain, psychological distress, depression, diabetes hypothyroidism, habitual bedtime, and habitual sleep duration were considered. Final models comprise 277 and 275 observations for Daytime Sleepiness Scales (DSS) and Fatigue Severity Scale (FSS) scores, respectively. SAS 9.4 Proc Mixed was used for statistical analyses.

Results. Mean (SD) DSS score increased from 4.5 (2.9) at T1 to 5.3 (3.4) at T2 ($p<.01$). Controlling for sex (n.s.) and CTG repeat number (n.s.), the final model revealed that mean daytime sleepiness increased between T1 and T2 ($p<.05$). Also, higher daytime sleepiness was found in patients who are younger ($p<.05$) and who have a higher BMI ($p<.05$), greater muscular impairment ($p<.05$), higher psychological distress ($p<.001$) and with a history of depression ($p<.01$). Mean (SD) FSS score increased from 4.4 (1.7) at T1 to 4.8 (1.7) at T2 ($p<.01$). Controlling for age (n.s.), CTG repeat number (n.s.), and habitual bedtime (n.s.), the final model revealed that mean fatigue increased between T1 and T2 ($p<.05$). Also, higher fatigue was found in women ($p<.05$) and in patients with a higher habitual sleep duration ($p<.01$), higher BMI ($p<.05$), higher muscular impairment ($p<.001$), and higher psychological distress ($p<.001$).

Conclusions. These results indicate that such measures as BMI and degree of muscular impairment that are part of physicians' routine check-up are useful to monitor daytime sleepiness and fatigue levels of DM1 patients.

Biography:

Luc Laberge has completed his PhD from Université de Montréal. He has published more than 100 book chapters, papers and abstracts in the field of neurology, education, and sleep medicine.

Publication of speakers:

1. Laberge, Luc & Lavigne, A & Auclair, Julie & Hébert, Marc. (2020). 0777 Variations in Vigilance and Sleep Among Underground Mine Workers During 14 Consecutive Night Shifts. Sleep. 43. A295-A296. 10.1093/sleep/zsaa056.773.

2. Laberge, Luc & Lavigne, Andrée-Anne & Auclair, Julie & Hébert, Marc. (2020). Variations de la vigilance subjective chez des travailleurs de mines souterraines pendant 14 quarts de nuit successifs. Médecine du Sommeil. 17. 78. 10.1016/j.msom.2019.12.128.

3. Laberge, Luc & Dumoulin, Catherine & Thivierge, Josée & Auclair, Julie & Murray, Nathalie & Arbour, Nadine & Gallais, B.. (2019). Effets des stages de soir sur le sommeil et l'apprentissage d'étudiantes en soins infirmiers : l'apport d'une recherche mixte pour identifier des recommandations favorisant la réussite. Revue Francophone Internationale de Recherche Infirmière. 5. 10.1016/j.refiri.2019.100179.

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