dysfunction. Non-invasive trans-spinal electrical stimulation (ts-ES) has been shown to activate neural networks below the injury and improve motor function recovery after SCI. The objective of this study was to compare changes in motor and autonomic function attributable to ts-ES in individuals with incomplete SCI after 4 weeks of personalized training. Methods: Participants received 4 weeks of treadmill training with personalized step-cycle based PNS and FES with and without non-invasive lumbar ts-ES. Clinical outcome measures of motor function (2-minute walk test, Berg Balance and modified SCIM-Mobility) and metabolic analysis (heart rate and rate of oxygen consumption (VO2 sub-max)) were assessed before and after training. Non-invasive electromyography (EMG) and kinematic data assessed motor function. Results: Based on participant feedback and data, ts-ES with PNS/FES during training was tolerable, improved leg movement and facilitated muscle activity in knee extensors with 10-25% increased RMS amplitude of pre-training EMG activity during both forward and backward walking. Moreover, ts-ES tended to increase HR and VO2 sub-max within one session. Conclusions: Personalized rehabilitation strategies combining ts-ES with traditional physiotherapy exercises and locomotor training have the potential to improve recovery after SCI.

P.030

Impact of lemborexant on daytime sleepiness/alertness in participants with comorbid insomnia and mild obstructive sleep apnea

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Background: COMISA (comorbid insomnia and obstructive sleep apnea) is associated with daytime functioning and cognitive impairments. This post hoc analysis assessed the impact of lemborexant (LEM), a dual-orexin-receptor-antagonist approved to treat insomnia in adults, on morning sleepiness/alertness in participants with COMISA. Methods: Of the overall population (n=1006), 410 (40.8%) adults (≥55 years) with comorbid insomnia disorder and mild obstructive sleep apnea (apnea-hypopnea-index, 5–≤15 events/h) from Study E2006-G000-304 (NCT02783729), a 1-month, randomized, placebo- and active-controlled study, were analyzed. Participants received placebo (PBO), LEM 5mg (LEM5), LEM 10mg (LEM10), or zolpidem tartrate 6.25mg (not reported). A daily sleep diary assessed morning sleepiness/alertness (1, extremely sleepy to 9, extremely alert). Participants (%) shifting from baseline mild/moderate sleepiness (≤3) towards greater alertness (4, 5, or >5) during the first/last 7 mornings of the study were analyzed. Results: At baseline, 17/75 (22.7%), 36/112 (32.1%), and 28/104 (26.9%) participants with COMISA receiving PBO, LEM5, or LEM10, respectively, reported mild/moderate sleepiness. Across the first/last 7 mornings, more participants shifted from mild/moderate sleepiness towards alertness with LEM5 (66.7%, 82.9%) and LEM10 (64.3%, 75.0%) versus PBO (47.1%, 64.7%), respectively. Conclusions: A greater percentage of participants with COMISA experienced improvements in morning sleepiness across the treatment period with LEM versus PBO.

P.031

Consistency of objective sleep maintenance data in Chinese and North American/European subjects with insomnia in lemborexant phase 3 studies

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Background: The consistency of effects of lemborexant (LEM), a dual orexin-receptor antagonist, on sleep maintenance variables across 2 phase 3 studies with contrasting populations was compared. Methods: E2006-G000-304 (Study 304; NCT02783729) and E2006-J086-311 (Study 311; NCT04549168) were 1-month, randomized, double-blind, placebo (PBO)-controlled studies evaluating LEM 10mg (LEM10) in adults with insomnia disorder. Global Study 304 (N=1006; PBO, n=208; LEM10, n=269) enrolled participants of any race (≥55y); Study 311 (N=193; PBO, n=100; LEM10, n=93) participants were exclusively Chinese (≥18y). Pairs of polysomnograms were conducted at baseline and after the first/last 2 doses of the 1-month treatment. Change from baseline in sleep efficiency (SE [%]), wake-after-sleep-onset (WASO [min]), and total-sleep-time (TST [min]) were analyzed. Results: Mean baseline sleep parameters: Study 304: SE, 67.9–68.9; WASO, 111.8–114.8; TST, 325.1–330.7; Study 311: SE, 69.4–70.3; WASO, 79.3-–85.8; TST, 333.2–336.7. Least squares mean [standard error] increases from baseline were significantly larger with LEM10 vs PBO ($P<0.001$) for SE (Study 304, 8.0 [0.7]; Study 311, 7.1 [1.4]) and TST (38.9 [3.7]; 32.8 [6.9]), as were decreases in WASO (-25.4 [3.1]; -17.8 [4.8]). Most treatment-emergent adverse events were mild–moderate. Conclusions: Short-term LEM10 treatment consistently improved objective sleep maintenance in patients with insomnia of different races.

P.032

Accessing ambulatory care in neurology: understanding and addressing demand in Calgary

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Background: Accessible ambulatory neurology care can reduce the need for inpatient evaluation. Aligning patient demand (service requests) with provider and space resources can optimize ambulatory clinic flow. In response to increasing referral volumes and wait times for neurologist access, a quality improvement initiative was undertaken to address demand. Methods: Process mapping and root cause analysis demonstrated access challenges and referral processing errors. Audit of 968 accepted referrals revealed variation in triage processes and decisions for referral questions. Neurologists defined inclusion criteria to specialty programs, based on referral questions. Referral management transitioned to a central intake model, reducing intra- and inter-clinic triage variability. Guidelines were established to prevent triage duplication and standardize appointment management. The primary outcome was accepted referrals per month.