32nd World Pediatrics Conference

December 04-05, 2019 | Barcelona, Spain

Short and long-term efficacy and safety of pediatric prolonged-release melatonin for insomnia in children with autism spectrum disorder

Athanasios Maras[1], Beth A Malow[2], Carmen M Schroder[3], Tali Nir[4], Nava Zisapel[4], Robert L Findling[5, 6] and **Paul Gringras[7]**

[1]Yulius Academy, Netherlands
[2]Vanderbilt University Medical Center, USA
[3]Strasbourg University Hospital, France
[4]Neurim Pharmaceuticals Ltd, Israel
[5]Kennedy Krieger Institute, USA
[6]Johns Hopkins University, USA
[7]Evelina London Children's Hospital, Guy's and St Thomas, UK

Objective: To present results from an international multicenter study on the efficacy and safety of pediatric-appropriate prolonged release melatonin minitablets (Slenyto®) in children and adolescents with Autism Spectrum Disorders suffering from insomnia.

Methods: A 13 weeks double-blind placebo controlled study, followed by a prospective 9-month open-label follow-up study to test the efficacy and safety of Slenyto® in community dwelling patients with ASD suffering from sleep problems. Sleep measures included the validated caregivers' Sleep and Nap Diary (SND) and Composite Sleep Disturbance Index (CSDI) and additional measurements capturing child behavior (Strength and Difficulty Questionnaire, SDQ) and quality of life of parents (WHO-5).

Results: 125 children and adolescents with ASD or a distinct neurogenetic disorder (age 2-17.5 years; 96.8% ASD, 3.2% Smith-Magenis syndrome) treated by Slenyto® (2 or 5mg) demonstrated efficacy and safety in improving total sleep time (TST) (p=0.034), sleep latency (SL) (p=0.011) externalizing behavior (p=0.021) and quality of parents life (p=0.01) over placebo after the 13 weeks double-blind period. 95 patients who completed the 13 weeks double-blind trial (51 Slenyto®; 44 placebo) at final 2/5mg dose, received open-label Slenyto® with optional dose adjustment to 2/5/10 mg/day after 3 months. 41 of the Slenyto® randomized group completed 1 year of Slenyto® and 38 of the placebo randomized group completed 9 months of Slenyto®. Subjects treated continuously with Slenyto® for 52 weeks (N=41) slept on average 62.08 minutes longer (p=0.007), fell asleep -48.6 minutes faster (p<0.001) and had longer uninterrupted sleep duration (89.1 minutes; p=0.001). In addition, quality of sleep improved (p<0.001) and number of awakenings decreased > 50% (p=0.001). Quality of parent's life significantly improved during long-term treatment with Slenyto®. Child's sleep disturbance (CSDI), significantly improved (p<0.001) in all completers regardless of randomization history (N=79). Slenyto® was generally safe; the most frequent treatment related adverse events were fatigue in 5.3% (5 events) and mood swings in 3.2% (3 events) of patients.

Conclusion: Slenyto® is an effective and safe treatment option for short and long-term treatment of children with ASD suffering from insomnia.