several dose adjustments based on clinical symptom improvement and tolerability.
Support (If Any): Jazz Pharmaceuticals

0766

EVALUATION OF CATAPLEXY-FREE DAYS IN CHILDREN/ADOLESCENTS WITH NARCOLEPSY WITH CATAPLEXY TREATED WITH SODIUM OXYBATE

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Introduction: Cataplexy resolves in some patients with narcolepsy when treated with sodium oxybate (SXB). A post-hoc analysis was conducted to determine the number of cataplexy-free days/week experienced by participants in a placebo-controlled, randomized-withdrawal study evaluating SXB treatment in children/adolescents with narcolepsy with cataplexy.
Methods: SXB-naïve participants were titrated to an optimal dose of SXB, then entered a stable dose period (SD) for 2 weeks; participants on SXB entered the SD on their usual dose of SXB for 3 weeks. After a 2-week double-blind, placebo-controlled randomized-withdrawal period (DB), participants entered an open-label safety period (OL) for total duration of 1 year or less. Cataplexy-free days/week were calculated from daily cataplexy diaries completed by participants during each study period. Safety was also assessed.
Results: Of 106 participants, 69.8% were SXB naïve and 30.2% were on SXB at enrollment. In SXB-naïve participants, the number (median [Q1, Q3]) of cataplexy-free days/week increased over the titration period: 0.0 [0.0, 2.0] week 1, 1.0 (0.0, 3.0) week 2, 4.0 (1.0, 6.0) last 7 days; n=71. During the last 14 days of the SD, the number of cataplexy-free days/week remained stable and was similar in participants who were SXB naïve or on SXB at study entry: 4.3 (1.0, 5.8), n=66 and 4.8 (0.8, 6.5), n=32, respectively. During the last week of the DB, the number of cataplexy-free days/week decreased to 0.0 (0.0, 2.7) in participants randomized to placebo (n=32) but remained stable at 4.0 (1.0, 6.0) in participants continuing SXB (n=31). The number of cataplexy-free days then remained stable throughout the OL. Common adverse events (>10%) in the safety population (n=104) were enuresis, nausea, vomiting, headache, and decrease in weight.
Conclusion: SXB treatment increased the number of cataplexy-free days/week in children/adolescents with narcolepsy with cataplexy. The safety profile of SXB in this study was consistent with previous studies in adult and pediatric narcolepsy.
Support (If Any): Jazz Pharmaceuticals.

0767

LONG-TERM SAFETY OF SODIUM OXYBATE IN PEDIATRIC NARCOLEPSY WITH CATAPLEXY: OPEN-LABEL CONTINUATION POST 1-YEAR OF TREATMENT

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Introduction: In a placebo-controlled, randomized withdrawal study with subsequent open-label investigation for up to 1 year, sodium oxybate (SXB) demonstrated efficacy and safety in the treatment of pediatric narcolepsy with cataplexy. In a further continuation period for up to 2 years, safety of SXB and effects on growth were assessed.
Methods: Participants who completed Part 1 (up to 52 weeks on study) could transition or re-enroll into the open-label continuation (Part 2) for up to an additional 2 years. Part 2 evaluations included body mass index (BMI), weight, height, treatment-emergent adverse events (TEAEs), and vital signs. Age- and sex-based percentiles for height, weight, and BMI at each assessment were determined using standardized growth charts (CDC, 2000).
Results: As of 30 April 2018, of the 44 participants in Part 2, 1 completed and 4 discontinued (3 withdrew consent, 1 lost to follow-up). Mean (SD) age at first SXB dose in Part 2 was 13.1 (2.2) years; 29.5% were 7-11 years, 70.5% 12-17 years; 68.2% male; and 65.9% white. In Part 1, mean baseline BMI was elevated relative to age-matched population means. In Part 1, there was slight initial decrease from baseline in median BMI and weight percentile values, which stabilized, and remained within normal range in Part 2 (median change from baseline to Part 2 month 3: BMI percentile -2.8%; weight percentile -2.4%). There was increase in absolute height and slight decrease in height percentile (median change from baseline to Part 2 month 3: height 9.0 cm, height percentile -2.0). In Part 2, TEAEs were reported in 18/44 (40.9%) participants; most frequent TEAEs were respiratory tract infection (6.8%), constipation (4.5%), diarrhea (4.5%), gamma-glutamyltransferase increased (4.5%), headache (4.5%), weight increased (4.5%). As of 30 April 2018, for Part 2, there were no serious AEs reported and no discontinuations due to TEAEs. Vital signs remained within normal range throughout the study.
Conclusion: Growth parameters remained stable overall, and no new safety findings were identified during the ≤2-year open-label continuation period (Part 2).
Support (If Any): Jazz Pharmaceuticals

0768

ASSESSING READINESS TO DRIVE IN ADOLESCENTS WITH NARCOLEPSY: WHAT ARE PROVIDERS DOING?

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Introduction: There are no universally accepted guidelines for assessing driving readiness in adolescents with narcolepsy. The purpose of the present study was to survey pediatric sleep medicine providers regarding their current practice patterns for assessing driving readiness in adolescents with narcolepsy, knowledge of their state laws regarding physician reporting of unsafe drivers, and opinions regarding what physician duty ought to be.

Methods: This was an anonymous web-based survey distributed via the Pedsleep listserv, which serves as a hub of communication for pediatric sleep medicine providers.
Results: A total of 52 pediatric sleep providers from 25 different states completed the survey. Eighty-eight percent of providers routinely assess driving readiness in adolescents with narcolepsy. Factors rated as "absolutely essential" by at least 50% of respondents included: history of previous fall-asleep crash or near miss, sleepiness (reported by patient), sleepiness (reported by caregiver), and cataplexy (reported by patient). Providers included maintenance of wakefulness testing: never (34%), if patient reports no/mild sleepiness (10%), if patient reports moderate/severe sleepiness (25%), or always regardless of patient symptoms (30%), and the median minimally acceptable result was 30 minutes (25-75th: 20-40 minutes). There was substantial lack of knowledge regarding legal obligations for reporting.
Conclusion: These results demonstrate great variability in practice patterns among pediatric sleep medicine providers for assessing driving readiness in adolescents with narcolepsy. In addition, it shows limited knowledge of the providers about their respective states' laws. Further studies are required to identify the best approach to assess residual sleepiness in this population.
Support (If Any): None

0769

THE UTILIZATION OF SOCIAL MEDIA TO IDENTIFY SLEEP PROBLEMS ASSOCIATED WITH PRADERWILLI SYNDROME

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Introduction: Prader Willi Syndrome (PWS) is associated with the generally accepted symptoms of hyperphagia, obesity, and developmental delay. Caregivers of children with the rare disease lack treatment options; therefore, they frequently engage on social media to learn about the diagnosis, share symptoms, and seek support. While research on sleep and PWS is limited, social listening found issues related to sleep to be the topic of many conversations in the PWS community. We therefore performed a retrospective analysis of caregivers reporting on social media.
Methods: After approval from the administrators of two private Facebook groups, TREND downloaded anonymous conversations from the Living Well group (n = 1261, includes caregivers of individuals of all ages) and the Love Bugs group (n=433, includes children aged 0-2 years). During the time period (2012-2018), there were 24,357 comments in Living Well and 146,458 comments in Love Bugs. We performed an automated analysis of caregiver conversations to quantify sleep problems in PWS, counting the number of times a given term or phrase was mentioned. A subsequent quality assurance was performed to assure the relationship between the terms and sleep.
Results: : In total, 3,749 sleep-related symptoms were documented. Dominant symptoms were: apnea (133 mentions in Living Well, 1410 mentions in Love Bugs), tiredness (163 mentions in Living Well, 500 mentions in Love Bugs), and drowsiness (112 mentions in Living Well, 503 mentions in Love Bugs). Excessive daytime sleepiness was not commonly mentioned in either group. The Living Well group mentioned narcolepsy (66 times) and cataplexy (110 times) more frequently than in the Love Bugs group (48 times for narcolepsy, 15 times for cataplexy).
Conclusion: Our retrospective analysis identified a range of sleep problems via social media of a large sample size of PWS including apnea, tiredness, narcolepsy, and cataplexy. The results suggest that the use of social media may enhance/advance our understanding of sleep problems in PWS which may be useful in directing drug development targets and management.
Support (If Any): Harmony Biosciences provided funding in support of this work.

0770

PRADER-WILLI SYNDROME: THE IMPACT OF GROWTH HORMONE ON THE SLEEP PHENOTYPES

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Introduction: Children with Prader-Willi Syndrome (PWS) are at an increased risk for sleep problems. Current treatment of PWS includes growth hormone, which may modify the sleep and clinical phenotypes. We retrospectively reviewed polysomnograms (PSGs) of children with PWS on or off growth hormone (GH) to typically developing obese (TDO) children to determine how sleep phenotypes vary.
Methods: After IRB approval, we compared baseline PSGs and clinical data from children with PWS on GH (PWS-G), off GH (PWS-O) and TDO (BMI > 30 kg/m^2). Mann-Whitney U test (2-tailed) was used for statistical analysis.
Results: There were 15 PWS-O (mean age 4.95 ±6.33 years, 10 males), 9 PWS-G (mean age 9.08 ±4.12 years, 6 males), and 25 TDO (mean age 12.00 ±3.51 years, 10 males). PWS-O compared to PWS-G had higher BMIs (25.8 ±4.9 versus 24.2 ±2.9). PWS-O demonstrated more severe obstructive sleep apnea (OSA) than PWS-G (mean AHI 13.1 ±13.3 versus 9.4 ±5.5). More of the PWS-O reported insomnia (28.6% versus 16.7%) and Pediatric Daytime Sleepiness Scale (PDSS) >15 (14.3% versus 0%) than PWS-G. TDO were more obese (BMI median 37.75 ±3.9 m/kg^2) compared to PWS-G and PWS-O. TDO had milder OSA (mean AHI 7.7 ±7.64). The PWS-G and PWS-O groups had lower oxygen nadirs (mean 84.3% and 82.9%, respectively) compared to TDO (mean 91.6%). None of the subjects had central sleep apnea. TDO had prolonged REM latencies (median 169.5 ±38.0 minutes) and decreased REM amounts (median 16.0 ±3.1%, p= 0.051, 0.067) while those with PWS-O and PWS-G had normal REM latencies (median 77.3 ±38.3 minutes, 86.5 ±31.9 minutes) and amounts (median 21.8 ±3.0%, 21.0 ±2.1%), respectively. TDO group reported greater sleepiness (PDSS > 15 (44%), p= 0.00058, 0.00214) and insomnia (68%, p= 0.012, 0.013) than both PWS groups.
Conclusion: GH treatment may modify the sleep phenotype in PWS. PWS-G demonstrated a lower AHI and less sleepiness than PWS-O. In comparison to TDO children, PWS-G had similar severity of OSA and REM characteristics but less sleepiness and insomnia.
Support (If Any):

0771

PITOLISANT IS A SAFE AND EFFECTIVE TREATMENT FOR CHILDREN WITH PRADER-WILLI SYNDROME (PWS)

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