**Conclusion:** Among patients with SDB who screened positive on pre-PAP RLS qualifier, IRLS score improved after PAP treatment. This is the first large clinic-based study to examine these changes and informing clinician of expected improvement in IRLS score in this population.
**Support (If Any):** None.

## 0663

### IMPACT OF CONTINUOUS POSITIVE AIRWAY PRESSURE (CPAP) THERAPY OF OBSTRUCTIVE SLEEP APNEA (OSA) ON OCCURRENCE OF PERIODIC LIMB MOVEMENTS OF SLEEP (PLMS)

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**Introduction:** The relationship between CPAP therapy and PLMS in OSA patients is unclear. Our aims were to assess whether the presence of PLMS represents an incomplete resolution of breathing abnormalities by measuring whether CPAP therapy improves or worsens the PLM index (PLMI).
**Methods:** We analyzed data from the Apnea Positive Pressure Long-term Efficacy Study (APPLES), a prospective 6-month multicenter trial of 1105 subjects with OSA randomized to active or sham CPAP. The participants underwent a baseline polysomnogram (PSG) followed by a titration PSG and follow up PSGs at 2-, 4- and 6-months. 558 were randomized to active CPAP. The change in PLMI from the titration study to the 6-month follow up study was compared between the CPAP and sham control groups to assess whether CPAP therapy worsens PLMI
**Results:** 19.7% of all participants had PLMI ≥ 10/hour. There was no correlation between PLMI and residual AHI on the titration study (R=-0.07, P=0.45). There was no difference between the CPAP and sham groups in baseline PLMI (7.2 ± 16.6 vs. 6.4 ± 13.7, P=0.4) or the mean change in PLMI from baseline to 6 months (3.0 ± 16.6 vs. 2.2 ± 15.9, P=0.5). Similar proportions of those started on CPAP versus those on sham had PLMI≥25/hour at baseline (9.5% vs. 9.1%, P=0.9) and at 6-months (14.7% vs. 11.3%, P=0.15). In the CPAP group, 52.2% had same or higher PLMI at 6 months compared to baseline versus 47.8% in the sham group (P=1.0). Among those with a baseline PLMI≥ 10/hour, there was a similar decline in PLMI in both CPAP and sham groups at 6 months (-4.2 ± 25.4 vs. -4.8 ± 25.0, P=0.9) in all participants and also specifically in participants with adherence > 4 hours/night (-4.3 ± 25.8 vs. -8.3 ± 25.1, P=0.4).
**Conclusion:** PLM occurrence was not suggestive of incomplete resolution of breathing abnormalities. We did not find any change in PLMS with CPAP therapy.
**Support (If Any):** NHLBI contract 5UO1-HL-068060.

## 0664

### THE EFFECT OF GABAPENTIN ENACARBIL ON DOPAMINERGIC AUGMENTATION IN PATIENTS WITH PRIMARY RESTLESS LEGS SYNDROME

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**Introduction:** Dopaminergic agents (DA) are the mainstay of treatment for restless leg syndrome (RLS). DA therapy is commonly associated with augmentation leading to worsening of symptoms. Gabapentin Enacarbil (GE) has been approved by the FDA for treatment of RLS, however its efficacy and effectiveness in DA induced augmentation is unclear. This study was designed to examine the effectiveness of GE on DA induced augmentation.
**Methods:** Patients aged 18–85 years, with a diagnosis of primary RLS, on dopaminergic therapy experiencing augmentation, were enrolled. The severity of augmentation was determined using augmentation severity rating scale (ASRS). Once qualified, GE 600 mg was added to the current DA therapy. After 90 days, DA therapy was gradually weaned off within a month. Patients were continued on GE therapy alone and were followed for 6 months after discontinuation of DA therapy. The progress was monitored by using International Restless Legs Syndrome-Rating Scale (IRLS) and ASRS.
**Results:** Preliminary data of this ongoing study are presented. Out of 5 patients - 4 were females and 1 male, mean age 58.4 years. At the time of enrollment, mean IRLS score was17.4 and mean ASRS score was 8. After 1 month of combination therapy (DA+GE), the mean IRLS score was reduced to 11.4; ASRS score was reduced to 0.4. After DA discontinuation and on GE therapy alone, at 90 day visit, mean IRLS score was 14, whereas mean ASRS score was reduced to 0. Common adverse effects observed included hypertension, meralgia paresthetica, flare up of arthritis, nausea, and hot flashes. None of the patients experienced dopamine agonist withdrawal syndrome (DAWS).
**Conclusion:** Gabapentin Enacarbil can be effectively used to treat patients with RLS experiencing augmentation on dopaminergic agents.
**Support (If Any):** XenoPort Inc.

## 0665

### ASSOCIATION BETWEEN RESTLESS LEGS SYNDROME AND HYPERTENSION IN KOREAN ADULT POPULATION

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**Introduction:** An association between restless legs syndrome (RLS) and hypertension remains controversial. Therefore, we investigated the relationship between restless leg syndrome and hypertension in a nationwide sample of the Korean adult population.
**Methods:** This is a cross-sectional questionnaire-based study including 2740 adults aged 19 years or more. A diagnosis of RLS was based on the International RLS Study Group criteria and those who meet the four essential criteria were categorized to have RLS. We further categorized those with RLS into two groups according to the RLS symptom frequency: frequent (≥ 2/week) and infrequent (< 2/week) groups. We conducted multiple logistic regression analysis while adjusting for age, sex, body mass index, alcohol consumption, smoking status, physical activity, average sleep duration, and habitual snoring.
**Results:** A total of 152 subjects (5.5%) were found to have RLS. The prevalence of hypertension was 12.2% in those without RLS, 21.0% in the infrequent RLS group, and 31.9% in the frequent RLS group. Multiple adjusted odds ratios (ORs) for hypertension were 1.10 (95% confidence interval [CI] 0.63 - 1.92) and 2.12 (95% CI 1.01 - 4.46) in those with infrequent and frequent RLS symptoms, respectively, compared with those without RLS. Subgroup analysis by sex showed that the association between RLS and hypertension remained significant in men (OR = 1.17, 95% CI 0.51 - 2.67 in the infrequent