

## P400

## Poster Session–Public Health–Day 1 (Poster)

## Do male GPs really know more about restless legs?

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**Introduction:** Prevalence of Restless Legs Syndrome (RLS) is estimated between 5% and 10% in general population samples. Henceforth, given its commonness and high occurrence rates, primary-care physicians or general practitioners (GPs) are likely to be confronted with RLS in their daily practice. Although treatment guidelines for RLS are established, treatment resistance, iatrogenic augmentation syndrome and comorbid conditions can be challenging for therapeutical strategies. The objective of our study was to evaluate respective levels of clinical knowledge and ease of RLS care management, in a sample of GPs.

**Method:** 6 months after the Restless Legs Awareness Day, a structured 10-item questionnaire, assessing demographics, clinical practice and RLS comprehension, was sent in 2023 (between March 23rd and April 10th), as an online survey through mass mailing to 1552 registered GPs, in the French speaking part of Belgium.

**Results:** The overall response rate (completed files) was 9.72% ( $n = 151$ ). With a mean age of 41.4 (15.5), the sample displayed a majority of women (69% vs. 32%). 51% of GPs presented durations of clinical practice between 1 and 9 years (38% between 10 and 39 years). 63% of physicians claimed awareness of RLS diagnostic criteria, whilst 37% did not. Merely 46% declared understanding of augmentation syndrome. While 69% of male GPs versus 50% of female GPs ( $p < 0.05$ ), reported average RLS patient frequencies between 1 and 5 per month, men (88%) reported significantly higher rates of sufficient clinical knowledge and self-perceived competence about RLS treatment than women (58%) ( $p < 0.004$ ). Disregarding gender, years of practice showed significantly higher clinical confidence in RLS acquaintance ( $p < 0.0015$ ).

**Conclusion:** Despite scientific literature totally lacking precisions about primary-care positioning in RLS care management, GPs should nonetheless be able to emit differential diagnostic hypotheses based on established clinical criteria, assess initial iron metabolism status and provide medical education to patients. GPs should also feel proficient in neuropharmacological treatment initiation, continuation or adaptation if required. While also seemingly related to practice-based years of experience, perceived competence, confidence in care management and self-estimated knowledge about

RLS, augmentation syndrome and treatment guidelines showed a foremost significantly gender-related effect. Possible gender-related biases in estimation-abilities of clinical competence cannot be ruled-out.

**Conflict of Interest:** No.

## P401

## Poster Session–Respiratory–Day 1 (Poster)

## New polysomnographic parameters in the evaluation of Obstructive Sleep Apnea: Relationship with cardiovascular risk

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**Introduction:** Obstructive Sleep Apnea (OSA) is the most common sleep-disordered breathing worldwide, and there is a bidirectional cause-effect relationship between OSA and cardiovascular disease. The apnea and hypopnea index (AHI) is currently the parameter that determines the presence and severity of OSA, however, it does not reflect its physiological impact, especially when it comes to assessing cardiovascular risk (CR). In this context, the main goal of this study is to assess the relationship between other parameters obtained through polysomnography and CR in patients with OSA.

**Method:** A retrospective observational study was conducted, where 58 level I polysomnography done between January and December 2023 were considered. All polysomnographic parameters were analysed, as well as hypoxic burden (HB), autonomic activation index, and the CR was achieved by the Framingham Score (FS). The polysomnographies were analysed using the American Academy of Sleep Medicine v3.0 guidelines. A non-parametric statistical approach was used, namely Mann-Whitney test (MW), Kruskal-Wallis test (KW) and Spearman's correlation coefficient ( $r_s$ ) using R language. The alpha error is set at 5%.

**Results:** Most of the sample (65.52%) were men, with a median age of 50.5 years ( $\pm 14$ ). The Body Mass Index median was 28.05 kg/m<sup>2</sup> ( $\pm 4.95$ ) where 65.51% were overweight. Taking gender into account, the MW shows significant differences on the median values of the following parameters: AHI– $\delta 30.45/h$  ( $\pm 37.35$ ) versus  $\delta 19.95/h$  ( $\pm 17.35$ ); Oxygen Desaturation Index– $\delta 16.95/h$  ( $\pm 35.4$ ) versus  $\delta 6.9/h$  ( $\pm 10.78$ ); Min. Desaturation Value– $\delta 84.5(\pm 9.75)$  versus  $\delta 88(\pm 5.25)$ ; Total HB (%min/h)–33.95 ( $\pm 59.85$ )  $\delta$  versus 16.25 ( $\pm 16.75$ )  $\delta$ ; HB in NREM (%min/h)– 35.4 ( $\pm 61.23$ )  $\delta$  versus 13.9 ( $\pm 18.96$ )  $\delta$ ; HB in supine position (%min/h)–71.6 ( $\pm 96.60$ )  $\delta$  versus 26.6 ( $\pm 19.13$ ) and HB in the non-supine position (%min/h) 29.90



( $\pm 51.15$ )  $\delta$  versus 9.75 ( $\pm 14.68$ )  $\varphi$ . Regarding the FS, 84.44% had a low risk, 11.11% a moderate risk and 4.44% a high risk, with no relationship with the sleep parameters (KW). AHI and the FS had a significant and moderate positive correlation ( $r_s = 0.369$ ).

**Conclusion:** Except AHI and FS positive correlation, there wasn't relationship between other polysomnographic parameters and the CR. The male study population has values with a greater physiological impact in terms of sleep parameters compared to females.

**Conflict of Interest:** No.

#### P402

##### Poster Session-Respiratory-Day 1 (Poster)

##### Restless legs syndrome is associated with poorer use of positive airway pressure among US veterans with obstructive sleep apnea

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**Introduction:** Restless legs syndrome (RLS) is associated with obstructive sleep apnea (OSA) and insomnia symptoms. RLS symptoms may improve with positive airway pressure (PAP); However, less is known about whether RLS poses a challenge to consistent PAP use. We aimed to describe the association of RLS with PAP use among US veterans with OSA.

**Method:** This retrospective cohort consisted of veterans with OSA initiating PAP therapy at the Miami VA center over 3 months. Inclusion criteria were completing questionnaires about demographics/sleep (schedule, RLS, insomnia sleepiness) on diagnostic polysomnography (PSG) night and attending follow up at our PAP clinic. PSG data and medical diagnoses data were extracted from the medical record. RLS diagnosis was per questionnaire and verified by a sleep neurologist. Objective PAP data were downloaded and averaged weekly during the initial 8 weeks of PAP use data. Logistic regression models were constructed to examine the association of RLS with PAP use (% nights with  $\geq 4$  h) after 1, 4, and 8 weeks of therapy.

**Results:** The cohort consisted of 94 veterans (93% male, 45% Black, mean age  $54 \pm 12$ ) with 46% meeting RLS criteria. Veterans with RLS had a greater prevalence of mood disorder (79% vs. 41%,  $p < 0.001$ ) and diabetes diagnoses (37% vs. 9%,  $p = 0.002$ ) than veterans without RLS. Additionally, veterans with RLS had a lower body mass index ( $32 \pm 5$  vs.  $35 \pm 9$ ,  $p = 0.01$ ), lower diagnostic apnea-hypopnea index ( $34 \pm 27$  vs.  $47 \pm 38$ ,  $p = 0.03$ ) and greater insomnia severity index ( $19 \pm 5$  vs.  $16 \pm 7$ ,  $p = 0.02$ ) than veterans without RLS. Veterans with RLS used PAP on less nights and had lower mean daily use at all time points. During the first week of therapy, veterans with RLS were 0.3 times as likely (95% CI: 0.1–0.8) to use PAP  $\geq 4$  nightly as veterans without RLS. Findings were consistent across all weeks.

**Conclusion:** Independent of insomnia and depression comorbidity, RLS was associated with poorer future PAP use among veterans with OSA. Clinicians should consider addressing RLS prior to or concurrent with PAP therapy initiation to improve treatment outcomes.

**Conflict of Interest:** No.

#### P403

##### Poster Session-Respiratory-Day 1 (Poster)

##### Excessive daytime sleepiness in obstructive sleep apnea: Indirect treatment comparison of wake-promoting agents in patients adherent/non-adherent to primary OSA therapy

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**Introduction:** There remains a unmet need for targeted treatment addressing excessive daytime sleepiness (EDS) in patients with obstructive sleep apnea (OSA). This network meta-analysis evaluated the efficacy and safety of wake-promoting agents (WPAs), namely solriamfetol, pitolisant, modafinil and armodafinil, in treating EDS among OSA patients.

**Method:** The network meta-analysis evaluated the efficacy and safety of WPAs in treating OSA-EDS. Randomized controlled trials (RCTs) were systematically searched to identify studies focusing on interventions for diagnosed OSA-EDS. The efficacy outcomes included the Maintenance of Wakefulness Test (MWT), Epworth Sleepiness Scale (ESS), Clinical Global Impression of Change (CGI-C), and Patient Global Impression of Change (PGI-C). Further subgroup analysis were performed among patients adherent/non-adherent to primary OSA therapy. The safety and acceptability outcomes included all cause dropout rate, adverse events (AEs) leading to treatment discontinuation, treatment emergent adverse event (TEAEs) and serious adverse event (SAEs). The study protocol has been registered in PROSPERO (CRD 42023429684).

**Results:** Compared to placebo, all four wake-promoting agents (WPAs) demonstrated significant therapeutic benefits for the Epworth Sleepiness Scale (ESS) and Maintenance of Wakefulness Test (MWT). Specifically, solriamfetol exhibited a significant effect on ESS (MD:  $-4.00$ ; 95% CI:  $-5.2$  to  $-2.9$ ) and MWT (MD: 10 min; 95% CI: 8.8–12). The Surface Under the Cumulative Ranking curves (SUCRA) analysis ranked solriamfetol, pitolisant, modafinil, and armodafinil in descending order of efficacy for ESS. A similar trend was observed for MWT, except that pitolisant was not included in the analysis. The superior efficacy of solriamfetol in ESS was further highlighted among both adherent (MD:  $-3.4$ , 95% CI:  $-4.9$ ,  $-1.8$ ) and non-adherent (MD:  $-8.4$ , 95% CI:  $-12$  to  $-5.3$ ) to primary OSA therapy subgroups. Solriamfetol showed the lowest risk of all-cause dropout (RR: 1.1, 95% CI: 0.79–1.50), and lower risk for SAEs (RR: 0.5, 95% CI: 0.08, 3.8) while pitolisant exhibited minimal risks of AEs leading to