gold standard for diagnosing OSA remains in-laboratory PSG; HSAT is an alternative in a select group of patients. For most patients with suspected mild OSA, in-laboratory PSG is preferred since HSAT may under-detect sleep-related events.
**Support (If Any):**

## 0719

### THE RISK OF PROGRESSION OF CHRONIC KIDNEY FAILURE IN PATIENTS WITH OBSTRUCTIVE SLEEP APNEA

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**Introduction:** To describe the risks of chronic kidney disease (CKD) progression in patients with obstructive sleep apnea (OSA)
**Methods:** In this retrospective case control study; patients with CKD and OSA compared to patients with CKD without OSA who followed up at Creighton University Hospital Clinic. Data retrieved from Electronic Medical Records: demographics, time of diagnosis severity of OSA , apnea hypopnea index, severity of chronic kidney disease using serum creatinine and CKD -EPI equation for glomerular filtration rate cut offs. Patient's kidney function was followed up for 10 years from their diagnosis of OSA. Worsening kidney function is defined on the basis of laboratory values including estimaed GFR( eGFR) and serum creatinine as well as Kidney Diseases Outcome Quality Initiative (KDOQI) 2002 definition and staging. We calculated the mean and SD when appropriate. P values less than 0.05 were considered statistically significant.
**Results:** 269 patients without OSA included in the study. 416 patients with mild OSA, 343 with moderate OSA and 225 with severe OSA mean (SD) age 46.6 (16.3), 52.9(13.5), 56.9(14.1) and 55.3(15.1) years respectively; 59.1, 56.5, 39.1 and 35.6% were females respectively. CKD stage 1 42.8, 26.9, 26.5 and 28.9% respectively. Stage 246.5, 56.3, 54.2 and 46.7% respectively. Stage 3 10.7, 16.9, 19.2 and 24.3% respectivelyPatient's renal functions who had CKD stage 2 or 3 with mild., moderate and severe OSA got worse in 21.2,31.5 and 26.7% respectively. compared to 13.1% with no sleep apnea.($p < .001$)) ,There was no significant difference on progression of CKD in late stages( CKD IV/V)
**Conclusion:** Patients with OSA and CKD are more likely to have worsening renal function compared to patients without OSA and this association may depend on severity of both CKD and OSA.
**Support (If Any):**

## 0720

### ACCURACY OF WATCHPAT PORTABLE SLEEP MONITORING AND SLEEP ASSESSMENT IN PATIENTS WITH ATRIAL FIBRILLATION

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**Introduction:** Obstructive sleep apnea(OSA) is an established risk factor for atrial fibrillation(AF), necessitating early diagnosis and management. Home-based sleep-monitoring technology has become a mainstream diagnostic modality. Peripheral arterial tonometry (PAT) device is increasingly being used to screen for OSA in patients with AF. Our study aimed to examine the accuracy of Watch-PAT (WP) in OSA evaluation, and night-to-night variability of sleep characteristics as measured by WP when used during consecutive night sleep studies.
**Methods:** Patients with history of AF undergoing clinically indicated PSG were prospectively enrolled and had concurrent WP while undergoing PSG. Patients then were studied again using WP over two consecutive days at home. We compared agreement of OSA severity(defined as no OSA[AHI (apnea hypopnea index)<5], mild OSA[15>AHI³5], moderate OSA[30>AHI³15], severe OSA[AHI>30]) and total sleep time(TST) using Cohen's Kappa(K) for categorical and Bland-Altman plots for continuous variables. To further characterize PSG versus WP, the cohort was stratified into paroxysmal versus persistent AF types. 1A/1B hypopnea scoring criteria was defined as per AASM.
**Results:** Our cohort included 24 patients with AF(80% male, mean age 68y). Most patients had clinically defined OSA(AHI³5). Patients with persistent AF had more severe OSA than those with paroxysmal AF (severe OSA present in 60% vs. 29%). Comparison of PSG to concurrently conducted WP in the lab showed substantial agreement in OSA severity by both 1A(K=0.623) and 1B(0.706) criteria. Percent difference in TST between PSG versus WP in the paroxysmal AF versus persistent groups was not statistically significant($p=0.387$). Comparing two consecutive at-home WP tests showed substantial agreement in OSA severity measures(1A=0.872,1B=0.889). Bland-Altman plots for TST and sleep architecture showed ³95% of residuals within 2 standard-deviations, suggesting intertester agreement. Confidence intervals were broad in these plots reflecting our small sample size.
**Conclusion:** Our findings demonstrate that WP is a reasonable alternative to PSG, particularly if using the 1B criteria to diagnose OSA. Additionally, our results show that persistent versus paroxysmal AF does not seem to affect the results of WP tests. Night to night variability of OSA measures and TST was small. Future studies should verify the results of our study in a larger cohort.
**Support (If Any):**

## 0721

### CORRELATION BETWEEN OXYGEN DESATURATION INDEX AND APNEA HYPOPNEA INDEX FOR DIAGNOSIS OF OBSTRUCTIVE SLEEP APNEA

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**Introduction:** Obstructive sleep apnea (OSA) is diagnosed through polysomnography (PSG) which can be done in lab or outpatient. PSG is conventionally not approved by insurance companies' in-patient which can result in delay in diagnosis and treatment of OSA. High resolution pulse oximetry (HRPO) done inpatient is easy to perform and calculates oxygen desaturation index (ODI) to asses' nocturnal desaturations which solely, is insufficient for diagnoses of OSA according to current treatment guidelines. We hypothesize that there may be a correlation between ODI and apnea hypopnea index (AHI) which can facilitate in earlier diagnosis of OSA.
**Methods:** We conducted a retrospective chart review to compare patients who underwent HRPO resulting in a sleep medicine consult inpatient followed by polysomnography outpatient over