for several sleep disorders where single night polysomnography is insufficient (ICSD-2). However, the optimal recording time for measurement remains unclear. We hypothesised that 7 days would provide similar data as recording for 14 days.

**Patients & Methods** We analysed 3 consecutive years of actigraphy data obtained within a tertiary sleep referral centre. Data were recorded continuously for two weeks using the AW2 Actiwatch (Cambridge NeuroTechnology, UK), using Actiwatch Sleep Analysis 5 software for analysis of the data. Parameters, including sleep efficiency (SE), sleep latency (SL), sleep fragmentation index (SFI), total sleep time (TST) and wake after sleep onset (WASO), were classified into week 1, week 2 and an overall average for the duration of 14 days. In addition, two experienced consultants working in the sleep laboratory compared the results of week 1 vs. week 2 independently, visually analysing the data for circadian rhythmicity and fragmentation of the pattern; allowing calculation of the intraclass correlation coefficient (ICC), κ.

**Results** The actigraphy of 259 patients (51.9% (124) male; mean age 42 (16) years) were analysed. There was no difference in SE, SL, SFI or WASO between week 1, week 2 and 14 days average recording. A difference was found between TST week 1 (399.9, 95% CI 389.9–409.9 mins) and TST week 2 (388.7, 95% CI 378.3–399.1 mins), but not between TST for 14 days average recording and either week (394.3, 95% CI 384.7–403.9 mins). Independent scorers achieved a strong agreement in the rhythmicity of the sleep pattern (ICC κ 0.794, p<0.001) and a low agreement for the fragmentation of the pattern (ICC κ 0.380, p<0.001).

**Conclusion** One week of actigraphy provides similar data to two week actigraphy, despite subtle differences between different weeks. One week actigraphy should be recommended as standard to maximise efficiency of the clinical service.

**S46** SLEEP DISORDERED BREATHING (SDB) IN PATIENTS OF TYPE 2 DIABETES MELLITUS(DM) WITH AND WITHOUT RETINOPATHY- A HOSPITAL BASED STUDY

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**Background** Higher incidence of SDB has been reported from West in patients having sight threatening retinopathy with limited information from South Asia.

**Methods** It was a prospective, observational study carried out on 80 patients of type 2 DM presented to Vitreo-retinal clinic. Patients with coronary artery disease, acute and chronic Heart Failure, concurrent hypothyroidism, known Obstructive sleep apnea (OSA) with DM and of any known respiratory disorder were excluded.

On the basis of fundus and fluorescein angiography they were divided into two Groups, Group I without retinopathy (n=50) and Group II with retinopathy (n=50). Latter had 30 and 20 patients of Non Proliferative Diabetic retinopathy (NPDR) and Proliferative Diabetic retinopathy (PDR) respectively. All patients underwent whole night attended polysomnography in the hospital.

**Results** The patients having diabetic retinopathy had higher age, BMI, waist circumference, Serum creatinine, HbA1c and Apnea Hypopnoea index (AHI) (p<0.05). PDR sub-group had a higher waist and neck circumference however NPDR patients had a higher HbA1c (p<0.05). OSA was observed in 66% and 40% of patients with & without diabetic retinopathy (12/30 vs. 38/50) respectively. On subgroup analysis, 90% of patients having PDR had OSA as compared to 50% in NPDR group. Severity of OSA was proportional to the presence of retinopathy (AHI=24.35±27.72 vs. 13.09±20.3 in Gp II & Gp I respectively). It was nearly twice as severe in PDR Group than NPDR Group (34.91±30.61 vs 17.3±23.94) with significantly higher desaturation (5.37±5.09% vs. 11.53±6.82%). On multivariate regression analysis only HbA1c levels correlated with presence of SDB in Diabetics.

**Conclusion** In a selective hospital based population of type 2 DM, prevalence and severity of SDB correlated with severity of retinopathy. A larger longitudinal study is need of the hour to predict factors responsible for OSA and find correlation between SDB with diabetic retinopathy.

**Key words** sleep disordered breathing, type 2 Diabetes Mellitus, NPDR, PDR, Apnea Hypopnoea Index.

**S47** COMPARING COPING STRATEGIES WHILE DRIVING IN PATIENTS WITH OBSTERCTIVE SLEEP APNOEA SYNDROME (OSAS) AND IN HEALTHY CONTROLS

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**Introduction** Tiredness while driving is potentially fatal and it is recommended that a driver who starts to feel tired should stop and...
S46 The Risk of Obstructive Sleep Apnoea is Significantly Higher in Patients with Chronic Kidney Disease - a Study from a Single UK Renal Centre
AW Seccombe, P Ferguson and J Baharani

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