MALAYSIAN SOCIETY OF
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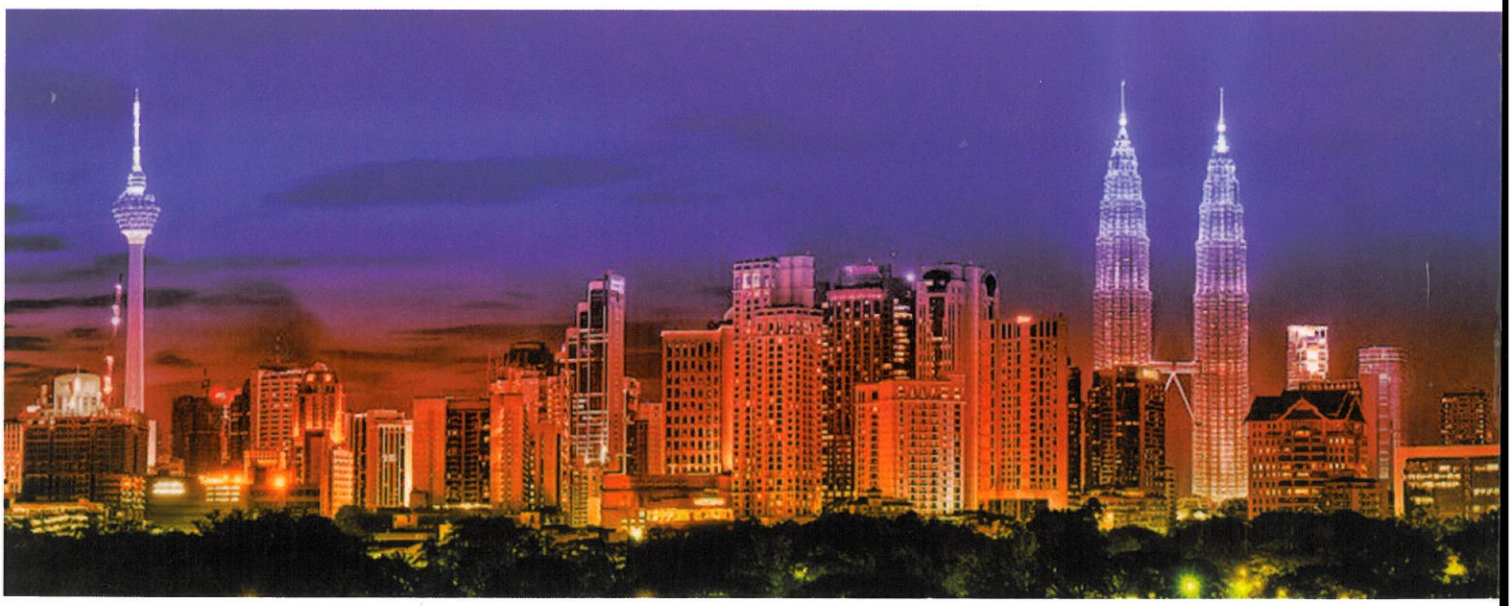

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MINISTRY OF HEALTH MALAYSIA

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ORAL PRESENTATIONS

FP01 **Screening for sleep apnea in the young hypertensives: Evidence from a case-control study in Malaysia**

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Objective: Younger patients with sleep apnea have higher risks of cardiovascular mortality compared to their normal counterparts. Yet it remains a continuous struggle to find a suitable cost-effective means of screening for sleep apnea in the young population. We conducted a case-control study of the possible association between sleep apnea and hypertension in a younger population in Malaysia.
Method: We analyzed data on sleep disordered breathing (based on a polysomnography study), body mass index (BMI), neck circumference, upper airway size, habitus and health history in 90 hypertensive and 90 non-hypertensive participants in a clinic-based setting. Independent t-test, chi-square, multivariate analysis and binary logistic regression models were used for case-control comparison.
Results: The mean age of the participants was 28 years; 69.5 percent were men. The incidence and severity of sleep apnea were significantly higher in the hypertensive subjects than the controls. Persons with sleep apnea (AHI 5 or more events/hour) had an odds ratio of 2.76 (95% confidence interval 1.57-4.86) and persons with severe sleep apnea (AHI 30 or more events/hour) had an odds ratio of 7.94 (95% confidence interval 4.21-15.33) of having hypertension than did persons without sleep apnea. Although adjusted for compounding factors, the BMI particularly decreased the odds ratio to a large degree; subjects with severe sleep apnea were still 72% more likely to have hypertension than subjects without sleep apnea.
Conclusion: Sleep apnea is associated with hypertension in the young adult in Malaysia. The association was more pronounced with the increasing severity of sleep apnea. Screening for sleep apnea should be considered in young adult with hypertension.
Keywords: Sleep apnea, hypertension, young adult, airway

FP02 **A validation study of portable device (Watch-Pat 200) for the diagnosis of Obstructive Sleep Apnoea**

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Study Objective: This study was designed to assess the accuracy and clinical efficacy of a wrist- worn portable device (Watch-Pat 200) to diagnose OSA.
Methods: Twenty participants with suspected OSA were recruited and had simultaneous PSG and Watch-PAT assessments within the hospital's sleep laboratory settings. The study population consisted of eighteen males and two females, mean age of 39, SD+_ 16 years, range (18- 70), Mean body mass index was 27.2, SD+_ 5.5 kg/m2 range (20-38) , Epworth Sleepiness score was 8.55 SD,+- 4.8. All PSG were scored according to the scoring manual of the American Academy of Sleep Medicine (2007) and the Watch-Pat data was analyzed by the automatic algorithm.
Statistical Analysis: The Wilcoxon signed rank test was applied to evaluate if the variables AHI, total sleep time and sleep efficiency differed significantly between the PSG and the Watch-PAT. This was chosen as the sample could not be assumed to be normally distributed. Following that, the correlation between the AHI was assessed using Spearman's correlation coefficient and Bland-Altman plots to test for agreement.
Results : The difference between the means for AHI for the PSG and the Watch-Pat was significant p= 0.0094. However Spearman's coefficient was 0.94, which suggests a very strong correlation between the AHI recorded by the WatchPat and the PSG. The Bland-Altman plot showed good agreement with the AHI mean difference of about 4.23 with a slight tendency to overscore the AHI at the mild range of OSA and underscore the range at the severe end of OSA.
Conclusion: In a population of patients with suspected OSA, the Watch-Pat 200 can quantify an AHI that compares favorably with the gold standard PSG for the diagnosis of Obstructive Sleep apnoea.
Keywords: Watch-Pat, Obstructive Sleep Apnoea