



**Service Priorities and Programmes**  
**Electronic Presentations**

**Convention ID:** 773

**Submitting author:** Dr Chie Wai YIM

**Post title:** Associate Consultant, KH, KCC

**Does Compliance to CPAP Affect Daytime Sleepiness in Obstructive Sleep Apneic Patients?**

*Yim CW(1), Mok T(1), Poon YN(1), Ling SO(1), Kwan HY(1), Yau A(1), MA O(1), Man LS(1), Tang WK(1), Woo FY(1), Ho HW(1), Fong SY(1)*  
*(1)Department of Respiratory Medicine, Kowloon Hospital*

**Keywords:**

Continuous Positive Airway Pressure

Daytime Sleepiness

Obstructive Sleep Apnoea

**Introduction**

Excessive daytime sleepiness (EDS) is one of the most common symptoms reported by patients with Obstructive Sleep Apnea (OSA). A study was conducted in the Department of Respiratory Medicine of Kowloon Hospital in 2017 to evaluate the effect of continuous positive airway pressure (CPAP) adherence on daytime sleepiness in OSA patients.

**Objectives**

1.To assess the excessive daytime sleepiness in sleep apneic patients on CPAP therapy  
2.To evaluate the sleep apneic patient's compliance / adherence to CPAP therapy  
3.To explore the factors which affect the CPAP compliance in sleep apneic patients

**Methodology**

A questionnaire was designed to assess EDS in OSA patients on CPAP therapy using Epworth Sleepiness Scale (ESS) and to review their adherence to CPAP therapy. Data on the pre and post CPAP ESS scores, number of years, number of days per week and number of hours per night using CPAP, and reasons for CPAP non-compliance were collected.

**Result**

A total of 163 patients had completed the questionnaire achieving 100% response rate. The pre CPAP ESS score ranged from 1 to 24 (mean 12.2) whereas the post CPAP ESS score ranged from 1 to 20 (mean 8.6). There was significant difference in the pre and post CPAP ESS scores ( $12.24 \pm 5.14$  versus  $8.62 \pm 4.01$ ,  $p < 0.001$ ) showing improvement in daytime sleepiness after CPAP therapy. Besides, the Post CPAP ESS score was correlated with hours per night using CPAP machine negatively ( $r = -0.259$ ,  $p = 0.001$ ) which meant patient's daytime sleepiness was reduced with longer use of CPAP machine during the night. 138 patients (84.7%) were found to be compliant (usage of CPAP machine  $> 4$  hours per night on at least 70% of nights) to CPAP

therapy. However, there were 35 patients (21.5%) showed no improvement in daytime sleepiness despite using CPAP machine and 25 patients (15.3%) were found to be non-compliant to CPAP therapy. Reasons for non-compliance to CPAP were nasal congestion, dry mouth, air leakage from mask, abdominal distension and difficulty in breathing and sleeping. Our study demonstrated that good CPAP compliance improves daytime sleepiness in OSA patients which concurred with overseas studies. Further efforts should be made to improve the compliance of those non-compliant patients.