

## KSN 2017 Abstract

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### The Effect of 12 months–Continuous Positive Airway Pressure Therapy on Cognitive function, Sleep, Mood and Health–related Quality of life

Jung hyun CHANG<sup>2</sup>, \*Ea wha KANG<sup>1</sup>

<sup>1</sup>Internal Medicine, Division of nephrology, NHIS Ilsan Hospital, Korea,South,

<sup>2</sup>Department of Otorhinolaryngology, NHIS Ilsan Hospital, Korea,South

**Case Study :** We describe the case of a 51–year–old male with a history of hypertension and a 3 year of peritoneal dialysis (PD) vintage who was followed through diagnosis and continuous positive airway pressure (CPAP) treatment of severe obstructive sleep apnea (OSA). Although there is only one report of acute beneficial effect of CPAP therapy on OSA in dialysis patients, there is no published report of effects of long–term CPAP therapy on cognition, daytime sleepiness, subjective sleep quality, mood and HRQOL in dialysis patients with OSA. After 12–months CPAP therapy, the patient reported feeling more refreshed in the morning and considerable improvement in memory. Daytime vigilance greatly improved with treatment and his post–treatment ESS score was 6, lower than the pre–treatment score of 15. He showed improved cognitive function with especially constructional praxis, executive function, verbal delayed recall memory, and orientation in the ADAS–K and MoCA test. In mood test, depressive symptom was improved although its difference was small. He also reported great improvement of HRQOL in the domain of cognition, sleep, overall health, physical function, fatigue and social interaction in KDQOL–36 questionnaire.

In conclusion, therapeutic use of CPAP led to improvement of not only sleep–related problems but also cognitive function and quality of life. To our knowledge, this is the first paper describing long term CPAP treatment benefit in dialysis patient with OSA. This case report emphasizes the need to proactive diagnosis and treatment of OSA in ESRD patients in order to improve patient–centered health.

**Keywords :** peritoneal dialysis, obstructive sleep apnea, continuous positive airway pressure ,