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Title: Prevalence of obesity hypoventilation syndrome in OSA patients in the UAE

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Body: Study objectives: Obesity causing hypoventilation in OSA patient has been termed Obesity Hypoventilation Syndrome (OHS). A retrospective analysis was done to find the Prevalence of OHS in diagnosed Obstructive Sleep Apnea (OSA) patients. Comorbidities like Diabetes (DM), Hypertension (HT), ischemic Heart disease (IHD), and pulmonary hypertension were also assessed Design: Descriptive analysis of retrospectively collected clinical data of patients who underwent a sleep study during March 2008 – June 2009. Setting: Sleep disorder centre of tertiary level military hospital

Variable	OSA only	OHS +OSA
	89	18
Male/Female	74/15	11/7
Age	47.01 ± 12	54.66 ± 15.11
BMI	35 ± 5.7	45.39 ± 13.11
AHI	35.5 ± 27.5	48.36 ± 27.9
pCO2	NA	57.4 ± 11.69

Results: 215 underwent sleep study. 107 (85 males and 22 females) had OSA (AHI > 5/hr). 16.8% of OSA patients (18 /107) were diagnosed to have OHS, 31.8% of females (7/22, p= 0.05) and 13% (11/85, p= .052, Fisher's exact test) of males. The females tended to be older with a mean age of 60yrs versus 48 for males. Adjusted for sex, using the Mantel-Haenzel test, OHS was significantly associated with hypertension with an OR of 3.5 (p= 0.030, 95% CI 1.19- 10.33) and DM with an OR of 4.6 (p= 0.017, 95% CI of 1.39 – 15.4), as well as with IHD with an OR of 5.09 (p = 0.036, 95% CI 1.21-21.35). Pulmonary hypertension and OHS: 6 OHS patients had PHT, (RVSP 25mm Hg at rest by echo). with sex adjusted OR of 16.1 (95%CI of 3.2 – 82.0). Conclusions: Prevalence of OHS was 16.8% There was a strong association between OHS, cardiovascular comorbidities, diabetes & PHT. 1 Oslone AL, et al OHS Am J Med 2005; 118:948 -56 2 Hida

W (2003) Quality of life in OHS Sleep Breath 7:1–2.