

Investigating the relationship between stroke and obstructive sleep apnea.

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BACKGROUND AND PURPOSE: We aimed to prospectively determine whether the incidence of obstructive sleep apnea in patients with recent stroke was significantly different from that of a sex- and age-matched control group with no major medical problems. **METHODS:** We prospectively performed overnight polysomnography in 24 patients with a recent stroke (13 men and 11 women; mean age [SD], 64.6 10.4 years) and 27 subjects without stroke (13 men and 14 women; mean age, 61.6 8.8 years). Patients with either ischemic or hemorrhagic stroke were entered into this study. Polysomnographic evaluations were performed within approximately 2 to 5 weeks after each patient's stroke. **RESULTS:** Obstructive sleep apnea was found in 10 of 13 men with stroke (77%) and in only 3 of 13 male subjects without stroke (23%) (P=.0169). Seven of 11 women with stroke (64%) had obstructive sleep apnea, while only 2 of 14 female subjects without stroke (14%) had obstructive sleep apnea (P=.0168). For men with stroke, the mean apnea/hypopnea index (SE) was 21.5 4.2 events per hour, while for male subjects without stroke it was 4.8 1.8 events per hour (P=.0014). For women with stroke the mean apnea/hypopnea index was 31.6 8.8 events per hour, while for female subjects without stroke it was 2.9 1.6 events per hour (P=.0024). The 4-year mortality for patients with stroke was 20.8%. All patients with stroke who died had obstructive sleep apnea. **CONCLUSIONS:** Patients with stroke have an increased incidence of obstructive sleep apnea compared with normal sex- and age-matched control subjects. Hypoxia and hemodynamic responses to obstructive sleep apnea may have predisposed these patients to stroke.