

Sleep Apnea Is An Independent Risk Factor For All-Cause Mortality: The Busselton Health Study

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Introduction: Previously published clinical cohort studies have suggested that obstructive sleep apnea (OSA) is a risk factor for cardiovascular disease associated mortality. However, it is unknown whether sleep apnea is an independent risk factor for all-cause mortality in a community-based sample free from clinical referral bias.

Methods: Residents of the Western Australian town of Busselton were investigated with a home sleep apnea monitoring device (MESAM (RDI)).

Data matching from the Australian National Death Index and the Western Australian Death Register were used to ascertain mortality in 397/400 participants (99.3%) after up to 14 years (mean follow-up 13.4 years).

Univariate analyses and multivariate Cox proportional hazards modelling was used to ascertain the association between sleep apnea and mortality after adjustment for age, gender, body mass, mean arterial pressure, total cholesterol, high-density lipoprotein cholesterol, diabetes and doctor diagnosed angina in those free from heart attack or stroke at baseline (n=380).

Results: Among the 380 participants, 18 had moderate-severe OSA (RDI \geq 15/hr, 6 deaths) and 77 had mild OSA (RDI <5/hr, 5 deaths).

Moderate-to-severe OSA was independently associated with greater risk of all-cause mortality (Fully adjusted Hazard Ratio= 6.24, 95% CL 2.01, 19.39) than no-OSA (n=285, 22 deaths).

Mild OSA (RDI 5-<15/hr) was not an independent risk factor for higher mortality (HR=0.47, 95% CL 0.17, 1.29).

Conclusion: Moderate-severe sleep apnea is independently associated with a large increased risk of all-cause mortality in this community based sample.

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