1324

Coronary Artery Disease, Acute Coronary Syndromes, Acute Cardiac Care –
Coronary Artery Disease – Epidemiology, Prognosis, Outcome

Association of sleep duration and cardiovascular events

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Background/Purpose: Sleep duration have been associated with cardiovascular (CV) risk in general population. Nevertheless, their impact in real-world large cohort data remains unclear.

Methods: 4861 healthy Taiwanese subjects (mean age 68 years, 3535 males, 72.7%) were enrolled. Three groups were defined: short sleep duration <6 h, reference sleep duration 7 to 8 h, and long sleep duration >8h. Multivariate Cox proportional hazard models were used to examine the associations between sleep duration and major adverse cardiovascular events (MACE), composite of acute myocardial infarction, ischemic stroke, and CV death.

Results: Sleep duration of short, reference, and long were reported by 37.7%, 30.3%, 32.0% of the cohort, respectively. 165 (3.4%), 502 (10.3%), 108 (2.2%) suffered from CV death, MACE, ischemic stroke, respectively. After adjusting for age, sex, systolic blood pressure, diabetes, body mass index, low density lipoprotein, and numbers of involved coronary artery, only long sleep was associated with higher MACE (hazard ratio (HR): 1.317, 95% confidence interval (CI): [1.052 to 1.648], p value = 0.016), ischemic stroke (HR: 1.858, 95% CI: [1.162 to 2.969], p value = 0.010), and lower rate of MACE plus heart failure (HR: 1.228, 95% CI: [1.034 to 1.459], p value = 0.019).

Conclusions: Our study addressed long sleep duration was independently associated with higher rate of MACE, ischemic stroke and MACE plus heart failure in adult Chinese population in Taiwan.

Table 1. The hazard ratios of outcomes in different sleeping duration time

	Sleep duration	HR (95% CI)	p value
MACE	<6 hrs	1.098 (0.877–1.376)	0.414
	6.5–7.5 hrs	as reference	
	>8 hrs	1.317 (1.052–1.648)	0.016
Ischemic Stroke	<6 hrs	0.930 (0.552–1.567)	0.785
	6.5–7.5 hrs	as reference	
	>8 hrs	1.858 (1.162–2.969)	0.010