

ORIGINAL RESEARCH COMMUNICATION

Betel-quid use is associated with heart disease in women^{1, 2, 3, 4}

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Background: Betel quid (*Areca catechu*) is used by ≈10% of the world population. Betel-quid use is associated with the metabolic syndrome—a risk factor for heart disease.

Objective: The objective was to test whether betel-quid use is associated with heart disease in adults.

Design: Nonpregnant adults aged 20–64 y ($n = 1932$, 52% women) from the nationally representative Nutrition and Health Survey in Taiwan (1993–1996) were studied for independent associations between betel-quid use and heart disease after adjustment for lifestyle factors, age, obesity, diabetes mellitus, hypertension, and concentrations of serum total cholesterol and HDL cholesterol.

Results: The prevalence of betel-quid use was higher in men than in women (31% compared with 2.4%; $P < 0.001$). The prevalence of heart disease was not significantly different between men and women (3.3% compared with 2.3%; $P = 0.12$). The prevalence of betel-quid use decreased, whereas the prevalence of heart disease increased, with age. Betel-quid users were younger, drank more, had a lower dietary fruit intake, had a higher Framingham risk score, and had higher serum triacylglycerol concentrations than did the nonusers. At a mean consumption rate of 10 times/d (the third quartile of betel-quid consumption in betel-quid users), betel-quid use was independently associated with the Framingham risk score in subjects without heart disease only if obesity was not included as an adjustment factor ($P = 0.007$). Moreover, the daily rate of betel-quid use was independently associated with prevalent heart disease; the odds ratio associated with a betel-quid consumption rate of 10 times/d was 1.37 (95% CI: 1.1, 1.6; $P = 0.003$) in women.

Conclusion: Betel-quid use is independently associated with heart disease in women.

Key Words: Betel quid • *Areca catechu* • heart disease • Framingham risk score • diabetes • metabolic syndrome

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