Heavy weekly alcohol consumption versus binge drinking after an acute coronary syndrome and risk of major adverse cardiovascular events at one year follow up


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Background: The association between heavy weekly alcohol consumption or binge drinking and the risk of major adverse cardiovascular events (MACE) after acute coronary syndromes (ACS) is still unclear.

Purpose: To determine the risks of MACE at one year follow up according to baseline alcohol consumption, especially in patients with heavy weekly alcohol consumption or binge drinking.

Methods: We analyzed data of 6053 patients hospitalized in 4 Swiss centres for an ACS and followed over 12 months. Data on alcohol consumption were collected at baseline and at one year follow up after ACS. Binge drinking was defined as the consumption of ≥6 units of alcohol on one occasion, for the 12-months period preceding the one-year follow up. We defined MACE as a composite of cardiac death, myocardial infarction, stroke or clinically indicated target vessel coronary revascularization. We applied Cox regression to assess the risk of MACE associated with heavy alcohol weekly consumption (>14 standard units/week) compared to light consumption (<1 standard unit/week) or abstinence, as well as the risk with binge drinking, compared to no binge drinking, adjusting for baseline differences (age, sex, body-mass index, smoking, diabetes, peripheral artery disease, stroke, hypertension, use of aspirin, anticoagulation, statin, beta-blocker, ACE-inhibitor or ATII receptor blocker).

Results: At baseline, 817 (13.4%) patients reported heavy weekly alcohol consumption and 717 (11.8%) reported to have at least one episode of binge drinking per month. The risk for MACE at one year follow up was not increased in those with heavy weekly consumption compared to light consumption (8.7% vs. 8.5%, HR 0.96, 95% CI 0.69–1.33, P=0.80) or no consumption (8.7% vs. 10.3%, HR 1.26, 95% CI 0.88–1.80, P=0.21). However, the risk of MACE was higher in those reporting binge drinking with less than one episode a month (9.4% vs. 7.7%, HR 1.67, 95% CI 1.32–2.12, P<0.001), as well as in those with at least one episode of binge drinking per month (13.4% vs. 7.7%, HR 2.07, 95% CI 1.62–2.65, P<0.001), when compared to no binge drinking.

Conclusion: In contrast to regular heavy alcohol consumption, binge drinking behavior is associated with significant increased risk of MACE 12 months after ACS.