

1C.04: COFFEE CONSUMPTION IS A PREDICTOR OF CARDIOVASCULAR EVENTS IN YOUNG AND MIDDLE AGED HYPERTENSIVE SUBJECTS.

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OBJECTIVE: Controversy still exists about the long-term cardiovascular and metabolic effects of coffee consumption in hypertension. Aim of the study was to assess the predictive capacity of coffee use for cardiovascular events (CVE) and to ascertain whether the coffee-CVE association was mediated by the long-term effects of coffee on blood pressure (BP) and glucose metabolism.

DESIGN AND METHOD: The analysis was made in 1201 participants from the HARVEST, a prospective cohort study of non-diabetic subjects aged 18-45 years, screened for stage 1 hypertension. BP was measured with ambulatory monitoring in all.

RESULTS: Among the participants, 26.3% were abstainers, 62.7% were moderate coffee drinkers (1-3 cups/day) and 10.0% were heavy coffee drinkers (>3 cups/day). During a 12.5 year follow-up there were 60 CVE. In multivariable Cox analyses, coffee consumption was a significant predictor of development of hypertension needing treatment with hazard ratios (HR) of 1.5 (CI, 1.1-1.9) for heavy drinkers and 1.1 (0.9-1.3) for moderate drinkers compared to abstainers. Also, coffee was a predictor of future prediabetes with HRs of 2.0 (1.3-3.1) and 1.3 (0.9-1.7), in the heavy and moderate drinkers, respectively. In multivariable Cox analyses, including other lifestyle factors, age, sex, parental CVE, BMI, total cholesterol, 24h ambulatory BP, 24h ambulatory heart rate and follow-up changes in body weight, both coffee categories were independent predictors of CVE with HRs of 4.3 (1.3-13.9) for heavy coffee drinkers and 2.9 (1.04-8.2) for moderate drinkers. Inclusion of hypertension development in the regression attenuated the strength of the coffee-CVE association with HRs of 3.9 (1.2-12.5) for heavy and of 2.8 (0.99-7.8) for moderate drinkers. When future prediabetes was also incorporated, the relationship was of borderline significance for heavy coffee drinkers (HR, 3.2, 0.94-10.9) and was no longer significant for moderate drinkers (HR, 2.3, 0.8-6.5).

CONCLUSIONS: Coffee use is linearly associated with increased risk of CVE in stage 1 hypertension. The effect of coffee on CVE seems to be at least partially mediated by its long-term effects on BP and glucose metabolism. Coffee consumption should be reduced in young-to-middle-age patients with hypertension.

PMID: 26102645 [PubMed - in process]