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Prevention

HYPERTENSION, OBESITY, DIABETES, AND HEART FAILURE-FREE SURVIVAL: THE CARDIOVASCULAR LIFETIME RISK POOLING PROJECT

Moderated Poster Contributions

Prevention Moderated Poster Theater, Poster Hall B1

Saturday, March 14, 2015, 10:15 a.m.-10:25 a.m.

Session Title: A Prevention Potpourri

Abstract Category: 21. Prevention: Clinical

Presentation Number: 1126M-05

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Background: Quantification of heart failure (HF)-free survival in the context of risk factor burden in mid-life may improve risk communication and prevention efforts.

Methods: We conducted a pooled, individual-level survival analysis from the Framingham Heart, Framingham Offspring, Chicago Heart Association Detection Project in Industry, and Atherosclerosis Risk in Communities studies. All participants were free of cardiovascular disease at baseline. We used a modified Kaplan-Meier analysis adjusted for competing risk of death and Irwin's Restricted Mean to estimate the overall and HF-free survival in participants with and without hypertension (HTN: BP \geq 140/90 mmHg or treatment), obesity (BMI \geq 30Kg/m²), or diabetes (DM: fasting glucose \geq 126 mg/dL or treatment), and combinations of these factors, at an index age of 45 years through age 95.

Results: During 471,988 person years of follow-up, 1449 incident HF events occurred. Men and women without HTN, obesity, or DM lived on average 35.3 and 37.0 years without incident HF respectively. Compared to participants with no risk factors, those with HTN, obesity, and or DM at baseline had shorter HF-free survival (3 to 11 years). Men and women without HTN, obesity, or DM at age 45 years lived on average 11.3 to 12.7 years longer free of HF than those with all three risk factors.

Conclusion: Reduction in HTN, obesity, and DM prevalence by age 45 years may substantially prolong HF-free survival, reduce HF-related morbidity, and reduce the public health impact of HF.

Heart Failure-Free Survival and Survival after Incident Heart Failure by Risk Factors (HTN, Obesity, DM) for Men and Women at Index Age of 45 Years

