HYPERTENSION, LIPIDS AND PREVENTION

GENDER AND ETHNIC DIFFERENCES IN CARDIOVASCULAR EVENTS AND MORTALITY IN PATIENTS WITH DEPRESSIVE SYMPTOMS

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Background: Substantial epidemiological evidence exists for a relationship between 'depression or depressive symptoms' and adverse cardiovascular outcomes. However, data on whether gender or ethnicity modulates this association are relatively scarce.

Methods: The study comprised 6814 asymptomatic men and women (52.85%), aged 45-84 yrs without prior cardiovascular disease, enrolled in the Multi-Ethnic Study of Atherosclerosis [MESA]. Depressive symptoms were measured at baseline using the Center for Epidemiological Studies Depression scale (CES). A previously validated CES cut off score of 16 was employed for this analysis. Cox proportional hazard modeling with appropriate adjustments was used to test association between depression at baseline and all cause mortality, cardiovascular events (CVDA) and stroke. Subsequently, gender and race -stratified analyses were performed.

Results: Of the 6773 individuals included, 17.5% had depressive symptoms. A total of 225 incident deaths, 324 CVDA events and 91 strokes occurred over a mean follow up period of 4.6 years. Significant and strong associations with CVDA, mortality and stroke were found in females (crude and adjusted), but not males [Table]. Association between depression and all cause mortality was noted uniformly in females of all races.

Conclusion: Depression is associated with incident primary cardiovascular events, stroke, and all cause mortality in healthy adult US females of all races with no prior history of cardiovascular disease.

Crude and adjusted hazard ratio estimates associated with depression (CES> 16) stratified by gender and race				
Events (n)	Females (3580)		Males (3193)	
All Races	Crude	Adjusted†	Crude	Adjusted†
CVDA (324)	1.64 (1.08-2.51)*	1.80 (1.16-2.80)*	1.22 (0.77-1.94)	0.98 (0.94-1.03)
Stroke (91)	1.87 (1.04-3.36)*	2.20 (1.20-4.05)*	1.329 (0.56-3.16)	1.40 (0.54-3.62)
Mortality ξ (225)	2.41 (1.60-3.63)*	2.61 (1.71-3.98)*	1.249 (0.70-2.22)	1.27 (0.79-2.02)
Mortality by Race				
White (75)	2.63 (1.29-5.33)*	2.73 (1.33-5.60)*		
Chinese (24)	2.76 (0.96-7.95)*	2.63 (0.89-7.73)*		
Hispanic (50)	2.49 (1.20-5.16)*	3.00 (1.40-6.44)*		
African American (76)	2.90 (1.08-7.79)*	3.16 (1.06-9.42)*		

† Adjusted for age, race, BMI, cigarette smoking, diabetes mellitus, income and education
* Statistically not significant ξ All cause mortality
CVDA = Myocardial infarction, Resuscitated Cardiac Arrest, Definite Angina, Probable Angina (if followed by Revascularization), Stroke, Stroke Death, Coronary Heart Disease Death, Other Atherosclerotic Death, Other CVD Death.