

Journal of the American Geriatrics Society 2016, 64(2), 442-444.

Copyright:

© 2016, Copyright the Authors. Journal compilation © 2016, The American Geriatrics Society

This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

DOI link to article:

https://doi.org/10.1111/jgs.13975

Date deposited:

08/06/2017
ACKNOWLEDGMENTS

Conflict of Interest: The editor in chief has reviewed the conflict of interest checklist provided by the authors and has determined that the authors have no financial or any other kind of personal conflicts with this paper.

Author Contributions: Cortés: study design, data interpretation, statistics, drafting the article. Farré, Pally: data interpretation, critical revision of article. García, Martín, Hernández, Romero, López: collected data. Briongos, Benzet, Franco, Rubio: study design, data interpretation. All the authors have read and approved the manuscript.

Sponsor’s Role: None.

REFERENCES


SENSORY IMPAIRMENTS AND CARDIOVASCULAR DISEASE INCIDENCE AND MORTALITY IN OLDER BRITISH COMMUNITY-DWELLING MEN: A 10-YEAR FOLLOW-UP STUDY

To the Editor: Hearing and vision impairments are common in older age. Evidence suggests that these sensory impairments are associated with incident cardiovascular disease (CVD) (myocardial infarction (MI), stroke), but previous studies have been undertaken mostly in specific subgroups of individuals with sudden sensorineural hearing loss or with stroke and in middle-aged populations rather than community-dwelling older adults. Therefore, the association between self-reported hearing and vision impairment and incident CVD, MI, and stroke and CVD mortality was examined in older men.

METHODS

Community-dwelling men aged 63 to 85 (N = 3,981, 82% of the British Regional Heart Study cohort alive in 2003) were followed for 10 years, until 2013. Information on lifestyle factors, comorbidities, hearing, and vision was obtained through postal questionnaires. Self-reported hearing aid use and ability to hear the television at a volume others find acceptable allowed for four categories of hearing: could hear (n = 2,851), could hear and used aid (n = 482), could not hear and no aid (n = 424), and could not hear and used aid (n = 168). Vision impairment was defined as not being able to recognize a friend across the street (n = 124). Dual sensory impairment (n = 57) consisted of hearing impairment (could hear with aid, could not hear and no aid, could not hear and used aid) and vision impairment. Follow-up for CVD (nonfatal and fatal) was through general practice records and mortality registers. Survival analysis was used to examine the association between sensory impairments and incident CVD and mortality. Cox proportional hazards regression was used to calculate hazard ratios (HRs) with 95% confidence intervals (CIs) using no hearing impairment and no vision impairment (individually and combined) as reference groups. Prevalent CVD cases were excluded.

RESULTS

During the 10-year follow-up, 1,463 deaths occurred, including 408 CVD deaths. In 3,466 men free of prevalent CVD, 489 CVD events, 288 MIs, and 216 strokes occurred during follow-up. In age-adjusted analyses, men who could not hear and did not use a hearing aid had greater risks of incident CVD, incident stroke, and CVD mortality compared to men who could hear (Table 1). These associations remained statistically significant after adjustment for social class, diabetes mellitus, hypertension, obesity, smoking, and physical activity. The adjusted hazards ratio (95% CI) were 1.50 (1.14–1.98), 1.56 (1.04–2.34), and 1.39 (1.00–1.93) for incident CVD, stroke, and CVD mortality, respectively. These associations remained statistically significant after adjustment for social class, diabetes mellitus, hypertension, obesity, smoking, and physical activity. Vision impairment and dual sensory impairment were not associated with CVD incidence or CVD mortality.

DISCUSSION

Men who could not hear and did not use a hearing aid had greater risks of incident CVD, particularly incident stroke, and CVD mortality than men who could hear. Previous research suggests that the associations between hearing impairment and CVD could be attributed to smoking and atherosclerosis, but in the current study, the associations remained significant after adjustment for smoking and CVD-related comorbidities. Not all hearing impair-
Hearing impairment in older men was associated with greater risks of incident stroke and CVD mortality. Early detection of hearing impairment in older adults could help prevent CVD. Further research is warranted into the possible mechanisms underlying these associations.

Ann E. M. Liljas, MPH  
S. Goya Wannamethee, PhD  
Department of Primary Care and Population Health, University College London, 

Peter H. Whincup, PhD  
Population Health Research Centre, Division of Population Health Sciences and Education, St George’s University of London, 

Olia Papacosta, MSc  
Kate Walters, PhD  
Steve Iliffe, PhD  
Lucy T. Lennon, MSc  
Department of Primary Care and Population Health, 

Livia A. Carvalho, PhD  
Research Department of Epidemiology and Public Health, 

Sheena E. Ramsay, PhD  
Department of Primary Care and Population Health, University College London, London, UK

ACKNOWLEDGMENTS

Conflict of Interest: All authors declare that there are no competing interests.

The British Regional Heart Study is funded by the British Heart Foundation (RG/08/013/25942). AL is funded by the National Institute for Health Research School for Public Health Research (509546). SR is funded by a UK
Medical Research Council Fellowship (G1002391). The opinions expressed in the paper are those of the authors and not necessarily those of the funding bodies.


Sponsor’s Role: None.

REFERENCES


This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

SEX-RELATED DIFFERENCES IN CENTENARIANS AND THEIR HEARTS

To the Editor: There are few data regarding sex-related differences in the hearts of centenarians. Data from the Cardiac and Clinical Characterization of Centenarians (4C) study are presented. One hundred eighteen centenarians were included (28 men, 90 women). Electrocardiography was performed in 103 subjects (87.3%) and echocardiography in 100 (84.7%). Men had higher tobacco and alcohol consumption than women (36.4% vs 2.6%; 59.1% vs 24.0%, respectively, P < .001). Men had a lower heart rate (73.4 ± 14.5 beats/min vs 81.1 ± 17.3 beats/min, P = .003) and were more likely to be able to walk 6 m (60.7% vs 37.5%, P = .03) and be independent (23.1% vs 7.0%, P = .01). Differences were seen in Katz categories that reflect independence or mild dependence (54% men, 39% women) and moderate dependence (8% men, 24% women), whereas total dependence was similar in both sexes (38% men, 37% women). Men were more likely to have normal cognitive function (46.4%) than women (22.2%) (P = .01). The main electrocardiographic (ECG) and echocardiographic findings are shown in Table 1; normal ECG recordings and left ventricle dilation were more frequent in women than in men.

Normal ECG recordings were more frequent in women, which has been reported elsewhere and could be related to the better performance of female hearts. A previous study in a population of 132 centenarians also showed a higher prevalence of ECG abnormalities in men (n = 36) than in women (n = 96), including abnormal axis, third-degree atroioventricular block, and myocardial infarction. None of the men and 86 women (89.6%) had normal ECG readings. In the 4C cohort, normal ECG recordings were more frequent in women. Differences in individual anomalies were not significant, but several were more frequent in men than in women with relatively small P-values (.05–.10): atrial flutter, premature atrial and ventricular, right and left bundle branch block, and first-degree. The only previous study of echocardiography in centenarians was retrospective, performed in a small group of 63 hospitalized centenarians without centralized analysis, and had no ECG data. The only sex-related differences that these authors reported was a higher prevalence of heart valve disease in men than in women, including aortic stenosis and insufficiency and mitral insufficiency. The current study could not confirm this finding.

Sex-related differences in human longevity are easy to find in centenarian populations, where women always outnumber men, as was the case in the 4C registry. Previous studies have related longer female lifespan to a healthier lifestyle, and the current finding of a much higher frequency of tobacco and alcohol consumption in men supports these findings. In spite of this difference that favors longevity in women, a previous study found better cognitive function in centenarian men than women. Alternatively, sex differences in longevity have also been related to mechanisms intrinsically associated with aging, changes in telomeres and cardiovascular-related genotypes. Several hypotheses have been proposed for these sex differences in longevity, including more-active female immune functioning, the protective effect of estrogen, compensatory effects of the second X chromosome, reduction in the activity of growth hormone and the insulin-like growth factor 1 signaling cascade, and the influence of oxidative stress on aging and disease. It is conceivable that the current study finding of more-frequent normal electrocardiography in women is probably related to lifestyle and variables intrinsically associated with female sex.

In conclusion, these data suggest sex-related differences in centenarians. Men had higher tobacco and alcohol consumption but a healthier profile, were more frequently independent and able to walk 6 m, and had better cognitive function. Normal ECG recordings were more frequent in women, who also had a faster heart rate. The higher prevalence of normal electrocardiography in women could be related to better performance of women’s hearts and may contribute to female higher longevity.