

2ND INTERNATIONAL CONFERENCE ON CARDIOLOGY AND CARDIOVASCULAR MEDICINE

July 16-17, 2025 | Rome, Italy



S. Ballegaard,^{1*+} J. Faber,^{1,2+} C. Selmer,^{1,2,3} F. Gyntelberg,⁴ S. Kreiner,⁵ B. Karpatschof,⁶ T. W. Klausen,¹ A. Hjalmarson,⁷ A. Gjedde^{2,8,9,10}

¹Endocrine Unit, Department of Medicine, Herlev-Gentofte University Hospitals, Herlev, Denmark

²Faculty of Health and Medical Sciences, University of Copenhagen, Copenhagen, Denmark

³Department of Endocrinology, Bispebjerg-Frederiksberg University Hospitals, Copenhagen, Denmark

⁴The National Research Center for the Working Environment, Copenhagen, Denmark

⁵Institute of Biostatistics, University of Copenhagen, Copenhagen, Denmark

⁶Institute of Psychology, University of Copenhagen, Copenhagen, Denmark

⁷Department of Cardiology, Sahlgrenska University Hospital, University of Gothenburg, Sweden

⁸Department of Neuroscience, University of Copenhagen, Copenhagen, Denmark

⁹Translational Neuropsychiatry Unit, Department of Clinical Medicine, Aarhus University, Aarhus, Denmark

¹⁰Department of Neurology and Neurosurgery, McGill University, Montréal, Québec, Canada

Cardiovascular Disorders and disease: In Ischemic Heart Disease, Reduced Sensitivity to Pressure at the Sternum Accompanies Lower Mortality after Five Years: Evidence from a Randomized Controlled trial.

Background

Autonomic nervous system dysfunction (ANSF) is associated with negative prognosis of ischemic heart disease (IHD). Elevated periosteal pressure sensitivity (PPS) at the sternum relates to ANSD and sympathetic hyperactivity. Two previous observational case-control studies of the effect of reduction of PPS suggested lower all-cause mortality from IHD and stroke. We now used a specific daily, adjunct, non-pharmacological program of reduction of elevated PPS to test the hypothetical association between the intervention and reduced all-cause mortality in stable IHD in a randomized controlled trial (RCT).

Methods

We completed active (n=106) and passive interventions (n=107) and compared the five-year mortalities. We also compared the five-year individual all-cause mortality of each participant to approximately 35.000 members of the general population of Denmark. Pooling the mortality data from the active group of the RCT with the two preliminary studies, we registered the mortality following active intervention of 1.168 person-years, compared to 40 million person-years of the pooled general population.

Results

We recorded fewer deaths of the active RCT intervention group than of the corresponding control group from the general population ($P = 0.01$), as well as of the passive RCT intervention group ($P = 0.035$). Meta-analysis of the three studies together demonstrated reduced 4.2-year all-cause mortality of 60% ($P = 0.007$).

Conclusion

The test of the hypothetical effect of intervention aimed at attenuation of ANSD accompanied by lowered PPS revealed reduced all-cause mortality in stable IHD.

Biography

Senior Scientist Medical department, Herlev-Gentofte University Hospital, Capital Region, Denmark Area of research. Cardiovascular and autonomic nervous system diagnostics Non pharmacological interventions in autonomic dysfunction in cardiovascular disease, diabetes and stress. Have invented device for measurement of autonomic function and developed a non-pharmacological intervention that reserves autonomic dysfunction and accordingly normalize a broad range of cardiovascular health risk factors which in synergy improves survival for autonomic nervous system dysfunction