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P05-04 Physical activity level and sedentary time prior to cardiac ward admission among patients with cardiovascular disease and its association to all-cause mortality

Amanda Ek¹, Lena Kallings², Mattias Ekström³, Mats Börjesson⁴, Örjan Ekblom²

¹Swedish school of sport and Health science, Stockholm, Sweden

²Åstrand Laboratory of Work Physiology, Swedish School of sport and Health sciences, GIH, Stockholm, Sweden

³Department of Clinical Sciences, Danderyd Hospital, Division of Cardiovascular Medicine, Stockholm, Sweden

⁴Institute of Medicine, Sahlgrenska academy, University of Gothenburg, Gothenburg, Sweden

Corresponding author: mats.brjesson@telia.com

Background

Low physical activity (PA) level and high sedentary time (SED) have been associated to cardiovascular (CVD) morbidity and mortality. Routinely assessing the PA-level of patients being admitted to hospital has been proposed. The aim was to explore PA-level and SED among patients prior to cardiac ward admission and whether this can predict all-cause mortality.

Methods

A longitudinal observational study of patients with ischemic heart disease, heart failure, cardiac arrhythmia, valvular heart disorder and inflammatory heart diseases treated on cardiac wards (2015-2016) in Stockholm, Sweden. Data on PA-levels and SED prior to admission were collected by validated questionnaires during inpatient care. PA level a regular week was calculated by an index (3-19 points) including everyday PA and exercise. The cut-off of insufficiently physically active was set to > 9 points. Individuals' reporting ≥ 7 hours of sitting a normal day were categorised as high SED. Differences in PA-level and SED between different diagnose groups were

explored by Benjamini-Hochberg procedure. The associations between PA-level and SED with all-cause mortality were analysed using cox regressions, adjusting for age, sex, diagnosis group, education level, disposable income, smoking status, alcohol consumption and eating habits.

Results

Among 1148 patients with CVD, approximately 56% were considered as insufficiently physically active (>9 points). In addition, approximately half the study population were categorized as high SED (≥ 7 hours per day). There were differences in PA-level and SED between the various cardiovascular diagnoses, with individuals with heart failure and valvular heart disorder being in general more inactive and having higher levels of SED. A total of 200 deaths occurred during a median follow-up time of 2.6 years. The mortality was higher among those categorised as insufficiently physically active (HR 1.49, 95% CI 1.08-2.07) or high SED (HR 1.79, 95% CI 1.32-2.43) compared to those reporting sufficient PA and low SED, respectively.

Conclusion

A high amount reported insufficient PA and a high amount of SED preceding hospitalisation. There was an association between PA (negatively) and SED (positively) with all-cause mortality among patients with CVD. This highlights the prognostic value of assessing patients' PA-level and SED in clinical practice.

Keywords: physical exercise, sedentary behaviour, heart diseases, survival