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Abstracts

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Univ.-Prof. Dr. Daniel Scherr

Postersitzung 20 – Risikofaktoren/ Stoffwechsel/Lipide 2

20-1

Value of blood pressure measurement earlier versus later in life to predict cardiovascular mortality

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Introduction: We here aimed at comparing the value of systolic blood pressure (BP) earlier versus later in life to predict cardiovascular mortality.

Methods: In a cardiovascular observation study (OS) we prospectively recorded fatal cardiovascular events over up to 19 years in 1282 patients of whom 570 had the Metabolic Syndrome (MetS) at baseline. These patients had participated in a health survey (HS) 15 years prior to the OS baseline. BP was measured both at the HS and at the baseline of the OS.

Results: We found that the increase in cardiovascular mortality matched the increase of BP in the HS in a linear way but this is not the case for BP assessed at the OS (Fig. 1). A cox regression analysis revealed that each millimeter of mercury (mm Hg) increased the risk for cardiovascular death by 2 % (HR = 1.02 [1.01–1.03], $p < 0.001$). Applying a stratification for the presence of MetS, we found that in both groups BP was a significant predictor of cardiovascular mortality (HRMetS = 1.02 [1.01–1.02], $p < 0.001$ and HRnoMetS = 1.02 [1.01–1.03], $p < 0.001$). In contrast, BP as measured at the baseline of the OS was not significantly associated with cardiovascular death during follow-up neither in the total population nor in any subgroup (HR = 1.00 [0.99–1.01], $p = 0.652$; HRMetS = 1.00 [0.99–1.01], $p = 0.468$ and HRnoMetS = 1.00 [0.99–1.01], $p = 4.66$).

Conclusion: We thus conclude that BP assessed earlier in life is a better predictor of cardiovascular mortality than BP assessed later in life.

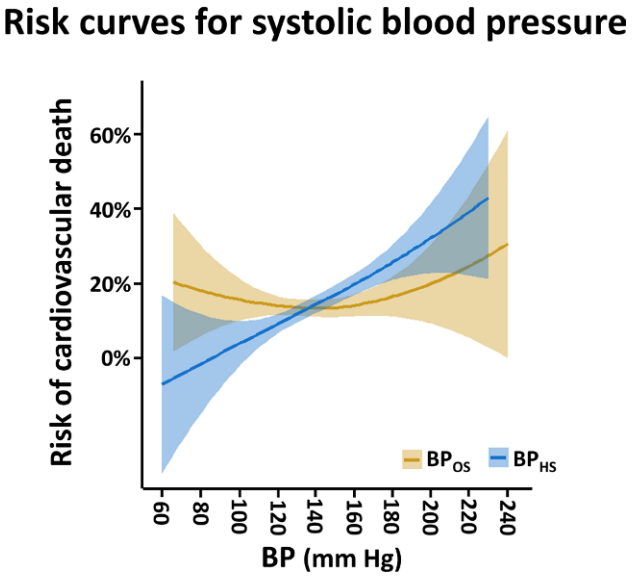

Fig. 1 | 20-1 Risk curves for systolic blood pressure. Risk curves are calculated for blood pressure (BP) assessed at the health survey (HS) and at the baseline of the cardiovascular observation study (OS) according to loess (LOcally WEighted Scatter-plot Smoother) fitting with 95 % confidence intervals for cardiovascular death during follow up.

20-2

Ceramide-based lipid profiles and the prevalence of Type 2 diabetes differ between patients with coronary artery disease and those with peripheral artery disease

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Introduction: Serum lipids and metabolic diseases, in particular type 2 diabetes (T2D) and non-alcoholic fatty liver disease (NAFLD), predict the atherosclerotic diseases coronary artery disease (CAD) and peripheral arterial disease (PAD). However, it is not known in how far a more detailed characterization including serum lipids improves discrimination of PAD from CAD.

Methods: A cohort of 274 statin-naïve patients with either PAD ($n = 89$) or stable CAD ($n = 185$) were referred to metabolic screening and were characterized using nuclear magnetic resonance- and liquid chromatography-tandem mass spectrometry based advanced lipid and lipoprotein analysis. Results were validated in an independent cohort of 1239 patients with PAD or CAD.