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ALBUMINURIA SIGNIFICANTLY PREDICTS CARDIOVASCULAR EVENTS IRRESPECTIVE OF THE METABOLIC SYNDROME AND THE BASELINE CORONARY ARTERY STATE

Poster Contributions
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Background: Albuminuria is an important indicator of cardiovascular risk. Whether albuminuria predicts cardiovascular events independently of the baseline coronary artery state in patients with the metabolic syndrome (MetS) and in subjects who do not have the MetS has not been investigated yet.

Methods: We measured urinary albumin and creatinine concentrations in 872 consecutive patients undergoing coronary angiography for the evaluation of established or suspected stable coronary artery disease (CAD). Albuminuria was defined as a urinary albumin to creatinine ratio of 30 μg/mg or greater. Prospectively, we recorded vascular events over 3.1±1.2 years.

Results: During follow up, 17.5% of our patients suffered cardiovascular events. In the total study population, albuminuria significantly predicted the incidence of major cardiovascular events after adjustment for age, gender, body mass index, type 2 diabetes mellitus, smoking, blood pressure, low-density lipoprotein cholesterol, high-density lipoprotein cholesterol and the estimated glomerular filtration rate (adjusted HR = 1.84 [1.30 - 2.61]; p=0.001). Further adjustment for the angiographically determined presence of CAD at baseline did not significantly attenuate the predictive power of albuminuria (HR 1.82 [1.28-2.59]; p=0.001). In analyses with respect to the MetS, the presence of albuminuria strongly and significantly predicted cardiovascular events in patients with the MetS (n=390; HR 1.80 [1.12-2.88]; p=0.015) as well as in those without the MetS (2.02 [1.18-3.48]; p=0.011). An interaction term MetS*albuminuria was not significant p=0.619), indicating that the cardiovascular risk conferred by the presence of albuminuria was not significantly different in subjects with the MetS compared to patients without the MetS.

Conclusion: We conclude that albuminuria significantly predicts cardiovascular events both in patients with and in subjects without the MetS independently of established cardiovascular risk factors and of the baseline coronary artery state.