**RISK MARKERS / RISK FACTORS**

**P2478 | BEDSIDE**

Urinary sodium excretion and risk of heart failure in men and women in the EPIC-Norfolk study

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**Aims:** Intervventional trials and prospective cohort studies provide evidence for a beneficial effect of reduced dietary sodium intake on blood pressure and risk of cardiovascular disease. We examined the association between urinary sodium excretion (USE) and risk of incident heart failure in an apparently healthy population.

**Methods and results:** Hazard ratios (HR, 95% CI) of heart failure comparing quintiles of USE were calculated in 9,017 men and 10,840 women aged 39-79 participating in the “European Prospective Investigation into Cancer and Nutrition” (EPIC) study in Norfolk. During a mean follow-up of 12.9 years, 1,210 incident cases of heart failure occurred. Compared to the reference category (127mmol/dl<USE<319mmol/dl) was associated with a significantly increased hazard of heart failure (1.32, 1.07-1.62) in multivariable analysis adjusting for age, sex, BMI, diabetes, cholesterol, social class, educational level, smoking, physical activity and alcohol consumption, with a marked attenuation (1.21, 0.98-1.49) when further adjusting for blood pressure. The bottom quintile (USE:<127mmol/dl) was also associated with an increased hazard of heart failure (1.29, 1.04-1.60) in multivariable analysis without relevant attenuation by blood pressure adjustment (1.26, 1.02-1.56), but with substantial attenuation when adjusting for inter-incident ischemic heart disease and baseline CRP levels and exclusion of events during the first 2 years (1.16, 0.96-1.47).

**Conclusion:** Our observational data suggest that a reduction of high dietary sodium intake might prevent development of heart failure by blood pressure lowering effects. The increased heart failure risk observed with low USE might result from pre-existing disease processes and given the totality of evidence on reduced sodium intake on health should not divert from current recommendations on reduction of dietary sodium in order to prevent cardiovascular disease.

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Significant ethnic differences in prevalence, clinical profile and cause of admission in patients with symptomatic left bundle branch block

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**Objectives:** To compare the prevalence, clinical characteristics, management and outcome among patients hospitalized with LBBB according to ethnicity (Middle Eastern Arabs (MEA) vs South Asians (SA)).

**Methods:** Retrospective analysis of the 20-year registry data (Jan 1991 to Jun 2011) of cardiac patients hospitalized in Doha, Qatar.

**Results:** Of the 44138 patients admitted under cardiology department, 582 patients had LBBB (1.4%). LBBB is less prevalent among SA compared to MEA (0.6% vs 2%, P<0.001).

Compared to MEA, SA were younger (54 vs. 65 years, P<0.001), more likely to be male (90.5% vs 61.1%, P<0.001), more likely to have hypertension (47.7% vs. 62%, P<0.001), diabetes (40.5% vs. 67.3%, P<0.004) and chronic renal failure (1.2% vs 13.3%, P=0.001), but more likely to have angina (51.2% vs 28.8%, P<0.001) and to be current smoker (27.4% vs 12.4%, P<0.001).

CHF was the most common cause of admission in both groups (34% in SA and 43% in MEA, P=0.20). SA patients were more likely to have STEMI (15.5% vs. 1.8%, P<0.001), shock (6% vs. 1.8%). In hospital mortality was similar in both groups (7.4% vs 8.9%, P=0.53).

**Conclusion:** South Asian patients with LBBB are younger, less likely to have co-morbid conditions except for smoking, but more likely to have STEMI.

**P2480 | BEDSIDE**

Assessment of the adequacy of electrocardiography improves cardiovascular risk assessment in the elderly

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**Aims:** Simple assessment of the existence of ST-T changes in the electrocardiogram is cheap and feasible and improves risk prediction significantly in the general, elderly population.

**Methods:** Participants from a prospective cardiovascular cohort study attending at an age 65 years or above were included. ST-T changes were divided into three groups of increasing severity (minor/intermediate/major) based on the Minnesota Code. The primary end-point was fatal CVD-event and the secondary was non-fatal and fatal CVD-event.

**Results:** A total of 7,201 persons were included with a median follow-up on 11.7 years. 2,210 reached the primary and 3,861 the secondary end-point. ST-T changes were frequently presented (18.2%) with increasing prevalence with increasing age. For the primary end-point, c-index improved from 0.707 (0.689-0.720) to 0.702 (0.702-0.738), p<0.001. For the secondary end-point, c-index improved from 0.652 (0.643-0.664) to 0.650 (0.651-0.675), p<0.001. cNRI was 19.4% (13.7%-25.0%), p<0.001 and IDI was 1.24% (1.01%-1.83%), p<0.001.

**Conclusion:** Simple assessment of the existence of ST-T changes in the electrocardiogram is cheap and feasible and improves risk prediction significantly in the general, elderly population.

**P2481 | BEDSIDE**

Association between multiple biomarkers and classical risk factors with early carotid atherosclerosis

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**Methods:** In a random sample of a population-based study in the Rhine-Main region of Germany 5000 subjects were scanned with vascular ultrasound. Aim of this analysis was to compare the impact of classical risk factors and new biomarkers and to compare the performance of markers in all risk factor groups and in risk factor subgroups.

**Results:** In total, 5,000 participants (aged 35 to 74 years; 2,540 men, 2,460 women) from the GHS were included. IMT was measured at both common carotid arteries (CCA) using an edge detection system and an IMT >0.85 mm was defined to be pathological. Plaques were defined as protrusion of ≥1.5mm in common, internal or external carotid artery. Estimated biomarkers were C reactive protein (CRP), highly sensitive assayed troponin I, Nt-proBNP, MR-proADM, ADMA and Copeptin. For the continuous biomarkers and risk factors we selected a linear regression to calculate the prediction of the model on IMT. In addition, logistic regression was calculated regarding the endpoint increased IMT (with or without IMT ≥0.85) or any plaque for the classical risk factors and the biomarkers. For definition of a cut-off value from this logistic regression, the Youden index was calculated representing the difference between the true positive rate and the false positive rate.

**Conclusion:** For classical risk factors, in comparison to a set of six modern biomarker, regarding increase in IMT >0.85mm negative and positive predictive value (NPV and PPV) obtained by logistic regression were 0.98 and 0.16 (cross-validated R² 0.44 in linear regression) and also 0.98 and 0.16 respectively for biomarkers (cross-validated R² 0.373 in linear regression). Presence of any plaque could be ruled out with an NPV of 0.84 and identified with a PPV of 0.61 for classical risk factors and 0.84 and 0.58 for biomarkers respectively.

**Conclusion:** The use of six easy to obtain risk markers allows ruling out pathologic IMT and presence of any plaque in a population in a reliable way. Modern biomarkers performed almost equal in assessing pathologic changes of IMT or presence of any plaques.

**P2482 | BEDSIDE**

Impact of beta-blockers and resting heart rate in diabetic patients with stable coronary artery disease

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**Background:** β-blockers reduce cardiovascular (CV) event in a heart rate (HR)-critical way. Modern biomarkers performed almost equal in assessing pathologic changes of IMT or presence of any plaques.