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**Background and Aims:** The recently introduced Coronary Event Risk Test version 2 (CERT2) is a validated cardiovascular risk predictor score that uses circulating ceramide and phosphatidylcholine concentrations. We here aimed at investigating the power of CERT2 to predict cardiovascular mortality in patients with type 2 diabetes (T2DM).

**Methods:** We investigated mortality in 280 male and 121 female patients with type 2 diabetes.

**Results:** Prospectively, we recorded 55 cardiovascular deaths in men and 19 in women during a mean follow-up time of 7.6±3.6 and 8.1±3.4 years respectively. Overall, cardiovascular survival decreased with increasing CERT2 risk categories. In Cox regression models, CERT2 significantly predicted the incidence of cardiovascular mortality in male patients with T2DM (unadj. HR 1.82 [1.39-2.37] per standard deviation; p<0.001), the unadj. HR in women was 1.36 [0.83-2.22]; p=0.228. After adjustment for age, BMI, current smoking, LDL cholesterol, HDL cholesterol, hypertension, and statin use the HR in men was 1.73 [1.31-2.29]; p<0.001 and in 1.40 [0.83-2.36]; p=0.210 women. Interaction terms CERT2 x gender were non-significant both in univariate analysis (p=0.354) and after multivariate adjustment (p=0.395).

**Conclusions:** We conclude that sex does not significantly impact the association of CERT2 with cardiovascular mortality in patients with T2DM.

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**EP479 / #394, TOPIC: ASA03 - DYSLIPIDEMIA AND RISK FACTORS / ASA03-08 NOVEL RISK FACTORS AND BIOMARKERS, POSTER VIEWING SESSION.**

**REMNANT CHOLESTEROL IN PATIENTS WITH ESTABLISHED CARDIOVASCULAR DISEASE PREDICTS CARDIOVASCULAR EVENTS BOTH AMONG PATIENTS WITH TYPE 2 DIABETES AND AMONG NON-DIABETIC SUBJECTS**

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**Background and Aims:** Remnant cholesterol, which is calculated as total cholesterol minus LDL cholesterol minus HDL cholesterol has attracted interest as a marker of cardiovascular event risk. The power of remnant cholesterol to predict cardiovascular events in patients with established cardiovascular disease is unclear and is addressed in the present study.

**Methods:** We enrolled 1822 consecutive patients with established cardiovascular disease, including 1472 with angiographically proven stable CAD, 350 with sonographically proven peripheral artery disease. prospectively, cardiovascular events were recorded over a mean follow-up period of 6.2±3.2 years.

**Results:** At baseline, remnant cholesterol was significantly higher in patients with T2DM (n=608) than in non-diabetic subjects (27±25 vs. 21±21 mg/dl; p<0.001). During follow-up, 584 of our patients suffered cardiovascular events; the event rate was significantly higher in patients with T2DM than in non-diabetic subjects (45.4 vs. 32.2%; p<0.001). Remnant cholesterol in Cox regression models adjusting for age, sex, hypertension, smoking, body mass index and LDL cholesterol independently predicted cardiovascular events in the total study population (standardized adjusted HR 1.15 [1.07-1.23]; p<0.001), and in patients with T2DM as well as non-diabetic subjects (standardized adjusted HRs 1.17 [1.03-1.34]; p=0.013 and 1.12 [1.01-1.23]; p=0.028, respectively).

**Conclusions:** From our data we conclude that remnant cholesterol in patients with established cardiovascular disease predicts cardiovascular events both among patients with T2DM and among non-diabetic subjects.
Background and Aims: The aim of this research was to determine the possible differences and associations of the Tyg index and TRG/HDL-C, CRP/HDL-C, NEUTROPHILS/HDL-C, LYMPHOCYTES/HDL-C ratios with disease progression and outcomes in COVID-19 hospitalized patients with AH.

Methods: 888 hospitalized patients in the Infections Diseases Unit of our Hospital from 03-2020 till 10-2021 were included. Variables were calculated on admission. Outcomes were defined as: patient’s death, intubation and hospital length of stay (LoS). Analysis was conducted using Logistic regression and chi-square test on SPSS 26.

Results: AH was reported in 402 patients (45.2 %) in the primary sample with a mean value of Tyg index:8.89 (SD 0.637), TRG/HDL RATIO:3.8 (SD 2.60), CRP/HDL:2.32 (SD 2.33), NEUT/HDL:162.87 (SD 113.90) and LYMPH/HDL:32.98 (SD 19.67). Logistic regression analysis of AH-group (n = 245) showed that patients with higher lymphocytes/HDL values, had a lower risk of LoS>7days (OR=0.977, p=0.008) while those with higher CRP/HDL values had an increased risk of death (OR=1.2, p=0.024). No other statistically significant difference was found in other ratios of concern or intubation. Patients with AH had higher risk of intubation compared to the non-AH group (OR=1.9198, 95%CI:1.147-3.064, p=0.017). Hypertensive patients also had a greater risk of LoS>7days (OR=1.6122, 95%CI:1.251-2.1389, p=0.001) and a greater risk of death compared to the non-hypertensives (OR=1.9179, 95%CI:1.2357-2.9768, p=0.003).

Conclusions: The LYMPH/HDL and CRP/HDL ratio may play a role as a predictor of disease severity and outcome in high-risk patient populations with AH, in the COVID-19 setting of disease.

EP482 / #208, TOPIC: ASAO3 - DYSLIPIDEMIA AND RISK FACTORS / ASAO3-08 NOVEL RISK FACTORS AND BIOMARKERS, POSTER VIEWING SESSION.

CORRELATION OF MONOMERIC C- REACTIVE PROTEIN LEVEL WITH SUBCLINICAL CAROTID ATHEROSCLEROSIS PROGRESSION IN PATIENTS WITH LOW-GRADE CAROTID STENOSIS AND MODERATE SCORE RISK

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Background and Aims: Residual inflammatory risk is identified by hsCRP level ≥2.0 mg/l. Monomeric CRP (mCRP) is an emerging inflammatory biomarker. We studied whether mCRP level is a better predictor of carotid atherosclerosis (CA) progression than hsCRP in patients with low-grade CA and moderate SCORE risk which achieved target LDL cholesterol (LDL-C) level.

Methods: The study comprised 80 patients of both genders 53.1±5.8 years old with moderate SCORE risk, LDL-C 2.7-4.8 mmol/l and hemodynamically insignificant (<50% stenosis) subclinical CA. All patients were prescribed statin to achieve LDL-C level <2.6 mmol/l and followed up for 7 years. At the completion of follow up subclinical CA progression, which was defined by the increase in the plaque number, was assessed by ultrasonography by the same operator, hsCRP and mCRP level was measured. Mann-Whitney U Test was used for intergroup comparison.

Results: Patients were divided by mCRP level 7.2 µg/l and hsCRP level 2.0 mg/l. The increase in the plaque number was 0.58±0.64 vs. 1.44±1.15 in patients with mCRP <7.2 µg/l and ≥7.2 µg/l, respectively. Thus, mCRP level ≥7.2 µg/l was associated with the 2.5 times higher increase in the plaque number (p=0.006, statistical power =0.88). The increase in the plaque number was 0.67±0.1 vs. 1.05±0.99 in patients with hsCRP <2.0 mg/l and ≥2.0 mg/l, respectively. However, the difference was statistically insignificant (p=0.14, statistical power =0.27).

Conclusions: mCRP level independently of hsCRP correlates with subclinical CA progression in patients with moderate SCORE risk and achieved target LDL-C. This work was supported by the Russian Science Foundation grant # 22-25-00054.

EP484 / #1467, TOPIC: ASAO3 - DYSLIPIDEMIA AND RISK FACTORS / ASAO3-08 NOVEL RISK FACTORS AND BIOMARKERS, POSTER VIEWING SESSION.

METABOLIC SYNDROME AND CARDIOVASCULAR DISEASE RISK IN END- STAGE RENAL DISEASE PATIENTS

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