Experimental Therapeutics, Coimbra Institute For Clinical And Biomedical Research (icbr), Faculty of Medicine, & CIBB Consortium, Coimbra, Portugal; [4] *Estesc-coimbra Health School, Pharmacy, Polytechnic Institute of Coimbra, Coimbra, Portugal;* [5] *Health Science Research Centre, University Of Beira Interior, Health Science Research Centre, University of Beira Interior, Covilhã, Portugal;* [6] *Hemodialysis Clinic Of Porto (chp), Center For Health Technology And Services Research (cintesis), Faculty of Medicine, Porto, Porto, Portugal;* [7] *Nefroserve Hemodialysis Clinic Of Viana Do Castelo, NefroServe, Viana do Castelo, Portugal;* [8] *Nefroserve, Hemodialysis Clinic Of Barcelos, NefroServe, Barcelos, Portugal;* [9] *Hemodialysis Clinic, Hospital Agostinho Ribeiro, Felgueiras, Portugal;* [10] *Hemodialysis Clinic Of Gondomar, Hemodialysis Clinic of Gondomar, Gondomar, Portugal*

Background and Aims : Cardiovascular disease (CVD) is one of the most common causes of morbidity and mortality in chronic kidney disease (CKD), especially in end-stage renal disease (ESRD). Metabolic syndrome (MS) is known to predispose to a higher CVD risk. It is likely that the co-existence of MS and CKD may enhance CVD risk factors. We aim to evaluate in ESRD patients on hemodialysis (HD), the impact of MS on conventional and non-conventional biomarkers of CVD risk.

Methods: We studied 308 ESRD patients on HD (2015-2019); 47 had MS according to World Health Organization classification. *We evaluated lipid profile,* HDL subfractions, adiponectin, leptin, tissue plasminogen activator (tPA), plasminogen activator inhibitor (PAI)-1, fetuin-A, asymmetric dimethylarginine (ADMA), elastase, and leukocyte and neutrophil counts.
Results: ESRD patients with MS (ESRD/MS), as compared to ESRD without MS, presented lower total cholesterol (TC) and low-density lipoprotein cholesterol (LDLc), and higher TC/HDLc ratio; lower(%) of large HDL and higher(%) of small and intermedium HDL subfractions. ESRD/MS patients also presented higher leukocyte and neutrophil counts, higher elastase, leptin, tPA, PAI-1 and ADMA levels, and lower adiponectin and fetuin-A concentrations.
Conclusions: Despite the lower cholesterol and LDLc in MS/ESRD patients, they showed more atherogenic changes, namely, lower large HDL%, the more atheroprotective subfraction, and higher small HDL%, the less protective subfraction; imbalance of anti- and pro-inflammatory adipokines; and, risk changes in biomarkers of inflammation, endothelial (dys)function and arterial calcification. Our data show a higher risk profile for CVD in ESRD/MS patients. Acknowledgment: UIDP/04378/2020 and UIDB/04378/2020; LA/P/0140/2020; PTDC/MEC-CAR/31322/2017; FCT/MCTES (PTDC/MEC-CAR/31322/2017) and FEDER/COMPETE 2020 (POCI-01-0145-FEDER-031322).

EP485 | #259, TOPIC: *ASA03 - DYSLIPIDEMIA AND RISK FACTORS / ASA03-08 NOVEL RISK FACTORS AND BIOMARKERS*, POSTER VIEWING SESSION.
CORRECTION OF LIPID, HEMOSTATIC DISORDERS AND REMODELING OF BRACHIOCEPHAL ARTERIES IN PATIENTS OF VERY HIGH RISK OF CARDIO-VASCULAR DEATH

O. Rubanenko [1], A. Rubanenko [2], I. Davydkin [1]. [1] *Hospital Therapy, Samara State Medical University, Samara, Russian Federation;* [2] *Propedeutic Therapy, Samara State Medical University, Samara, Russian Federation*

Background and Aims : To study lipid and coagulation indicators and remodeling of brachiocephalic arteries in patients of very high cardio-vascular death risk receiving statins.

Methods: Studied were 116 patients with coronary artery disease (mean age − 54.7±3.5 years). We evaluated fibrinogen, D-dimer, von Willebrand factor levels, lipid analysis and performed ultrasound triplex scanning of brachiocephalic arteries.
Results: 24 weeks of atorvastatin and rosuvastatin treatment resulted in reducing of total cholesterol, LDL-cholesterol, triglycerides, von Willebrand factor, D-dimer and fibrinogen levels (p<0.05). Atorvastatin also increased HDL-cholesterol level (p<0.05). Cross-sectional area of the lumen of the left internal carotid artery due to atorvastatin therapy increased by 25.6% (p<0.05), and cross-sectional area of the lumen of the right internal carotid artery due to rosuvastatin treatment increased by an average of 21.6% (p<0.05).

Conclusions: Long term statin therapy results in achievement of target levels of lipid indicators and also lowering of D-dimer, von Willebrand factor and fibrinogen levels. Long term statin therapy in some cases decreases atherosclerosis progression in brachiocephalic arteries.

EP486 | #1253, TOPIC: *ASA03 - DYSLIPIDEMIA AND RISK FACTORS / ASA03-08 NOVEL RISK FACTORS AND BIOMARKERS*, POSTER VIEWING SESSION.
DIAGNOSTIC ROLE OF SORTILIN AND INFLAMMATION MARKERS IN ATHEROGENESIS OF CORONARY ARTERIES IN PATIENTS WITH ARTERIAL HYPERTENSION

I. Sharafutdinova, I. Gubareva, Y. Vukolova. *Department Of Internal Diseases, Samara State Medical University, Samara, Russian Federation*

Background and Aims : To study the associations of pro-inflammatory interleukin IL-8 and anti-inflammatory IL-10 in blood serum and sortilin levels in patients with arterial hypertension(AH),with varying degrees of atherosclerotic lesions of the coronary arteries.

Methods: 83 male patients aged from 30 to 66 years old with AH of I-III stages.The patients were divided into groups depending: group I consisted of patients with unchanged coronary arteries (CA), (n = 10); group II − patients with CA tortuosity (n = 20); group III − patients with coronary artery lesion less than 50% (n = 19); group IV included patients with coronary artery lesion more than 50% (n = 24). The control group consisted of practically healthy individuals (n = 10). The subjects were assessed: IL-8, IL-10 (pg/ml), sortilin (ng/ml) of blood serum.
Results: In the first three groups of patients high numbers of sortilin activity were recorded (124.02±16.6; 161±19.1; 123.2±21.1; 65.13±10.1, respectively) compared with group IV and control one (p <0.05). A high level of sortilin was combined with an increase in the concentration of pro-inflammatory IL-8 in groups I-III (55.15±5.1; 56.98±3.5; 45.1±0.1; 33.24±1.4), while the greatest increase took place in groups I and II. The concentration of IL-10 in group IV group was 70% higher than the control(33.10±2.6; 36.85±2.8; 22.34±1.83; 48.61±4.8).
Conclusions: A high level of sortilin is associated with an increase of pro-inflammatory cytokines II-III groups and of CA damage which confirms the role of inflammatory reactions in the initiation and progression of atherosclerotic lesions. In group IV processes initiated by anti-inflammatory cytokines prevailed.

EP487 | #328, TOPIC: *ASA03 - DYSLIPIDEMIA AND RISK FACTORS / ASA03-08 NOVEL RISK FACTORS AND BIOMARKERS*, POSTER VIEWING SESSION.
**BASELINE HIGH-DENSITY LIPOPROTEIN LEVEL IS ASSOCIATED WITH COVID-19 PNEUMONIA SEVERITY IN HEMODIALYSIS PATIENTS**

N. Stepanova [1,2], A. Rysyev [3], O. Rusyn [4], T. Ostapenko [5], L. Snisar [1,2], S. Rusanov [2]. [1] *Nephrology And Dialysis, State Institution "Institute of Nephrology National Academy of Medical Science of Ukraine, Kyiv, Ukraine;* [2] *Nephrology, Dialysis Medical Center LLC "Nephrocenter", Kyiv, Ukraine;* [3] *Nephrology, Dialysis Medical Center LLC "Link-Medital", Odesa, Ukraine;* [4] *Nephrology, Dialysis Medical Center LLC "Nephrocenter", Lviv, Ukraine;* [5] *Nephrology, Dialysis Medical Center LLC "Nephrocenter", Zaporizhzhia, Ukraine*

Background and Aims : A decline in high-density lipoprotein cholesterol (HDL) has been observed in the general population of COVID-19 patients. However, there is a general lack of data on the association between the baseline HDL level and COVID-19 outcomes in HD patients. The present study aimed to assess the association between baseline HDL levels and COVID-19 pneumonia severity in HD patients.

Methods: A total of 428 HD patients aged 55 (44-64) years and a dialysis vintage of 44 (21-76.6) months were enrolled in this multicenter retrospective cohort study. Baseline HDL levels were obtained from the electronic health records of the patients. Severe COVID-19-associated pneumonia was estimated based on chest CT findings of pulmonary

involvement. The Mann-Whitney test, the Spearmen correlation test, and the Cox regression analysis were used for the statistical analysis.

Results: Among 428 enrolled HD patients, there were 142 (33.2%) patients infected with COVID-19 and 286 (66.8 %) non-infected patients. Forty (28%) of 142 COVID-19 positive patients were hospitalized, 34 patients (24%) needed oxygen supplements and 16 patients (11.3%) died. The baseline HDL level was significantly lower in the COVID-19 patients compared with the non-infected patients ($p = 0.011$). Moreover, the baseline HDL level was significantly negatively associated with CT findings of pulmonary involvement (Fig. 1). In the Cox regression analysis adjusted for age, diabetes and dialysis vintage, low HDL level (<1.22 mmol/L) was found to be associated with COVID-19-related mortality in the HD patients (HR 0.57, 95% CI 0.37; 0.89).
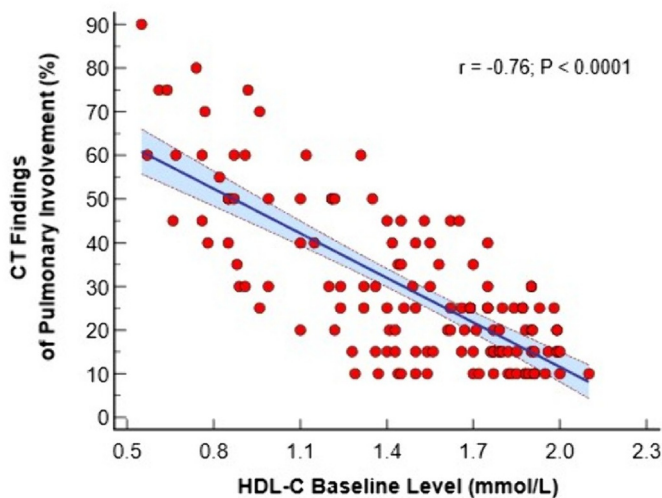
Conclusions: Baseline low HDL level was independently associated with severe COVID-19 pneumonia in HD patients.

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**SERUM INDOXYL SULFATE LEVEL PREDICTS ATHEROGENIC DYSLIPIDEMIA IN DIALYSIS PATIENTS**

N. Stepanova, L. Korol, O. Burdeyna, L. Snisar, L. Lebid, O. Kompaniets. *Nephrology And Dialysis, State Institution "Institute of Nephrology National Academy of Medical Science of Ukraine", Kyiv, Ukraine*

Background and Aims : It is suggested that both high level of indoxyl sulfate (IS) and atherogenic dyslipidemia are associated with CVD in dialysis patients. However, it remains unanswered whether serum IS affects lipid profile in dialysis patients. This study was designed to explore the potential association between IS and atherogenic dyslipidemia in the dialysis population.

Methods: A total of 78 ESKD patients aged 49 (40-56.7) years and with a dialysis vintage of 30 (18.5-88) months were enrolled in this cross-sectional study. Among them, were 33 (42.3%) patients treated with peritoneal dialysis (PD) and 45 (57.7%) hemodialysis (HD) patients. HDL-C and triglyceride levels were used to define atherogenic dyslipidemia. Serum IS was measured spectrophotometrically. The data were presented as Me (Q25-Q75) and compared using the Kruskal-Wallis test. The Spearmen correlation test and the logistic regression analysis were performed to assess the association between IS and dyslipidemia.

Results: Serum IS level was statistically higher in the hemodialysis patients compared with the peritoneal dialysis patients: 47.5 (30.5-83.0) vs 37.5 (18.5-43.5) μg/mL, p = 0.03. Serum IS was negatively associated with HDL-C level (Fig. 1) and had a direct correlation with triglycerides concentration (Fig. 2). The logistic regression analysis demonstrated that elevated serum IS level (≥52 μg/mL) was an independent risk factor for atherogenic

dyslipidemia even after adjustment for potential confounders (age, sex, body mass index and dialysis modality), OR = 1.3, 95% CI: 1.01-2.19, p = 0.01).
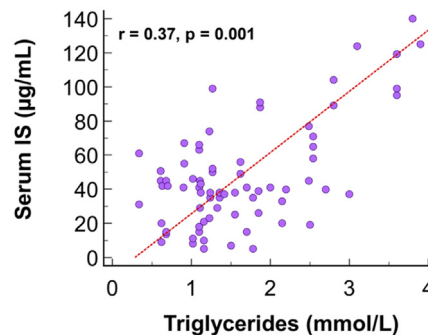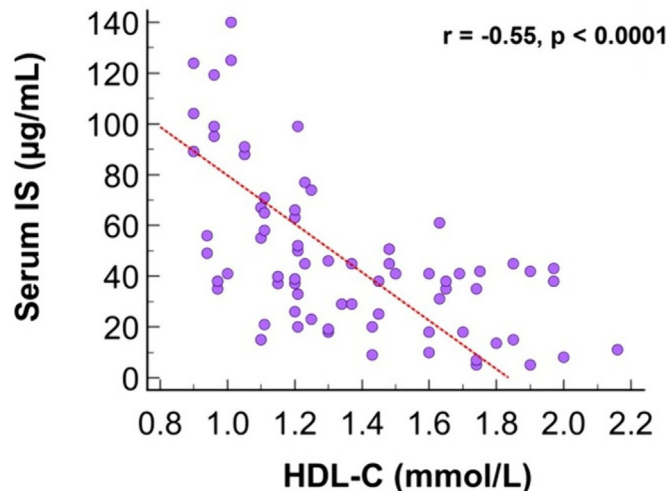
The logistic regression analysis demonstrated that elevated serum IS level (≥52 μg/mL) was an independent risk factor for atherogenic dyslipidemia even after adjustment for potential confounders (age, sex, body mass index and dialysis modality), OR = 1.3, 95% CI: 1.01-2.19, p = 0.01).

Conclusions: The results of this study indicate that elevated serum IS is an independent risk factor for atherogenic dyslipidemia in dialysis patients.

EP489 / #930, TOPIC: *ASA03 - DYSLIPIDEMIA AND RISK FACTORS / ASA03-08 NOVEL RISK FACTORS AND BIOMARKERS*, POSTER VIEWING SESSION.
PLASMA ADIPONECTIN AS AN INDICATOR OF THE EFFECTIVENESS OF CHD THERAPY IN PATIENTS WITH METABOLIC SYNDROME

D. Tanyanskiy, E. Firova, A. Denisenko. *Department Of Biochemistry, Institute of Experimental Medicine, St-Petersburg, Russian Federation*

Background and Aims : Adiponectin has a potential effect on atherogenesis. In this regard, adiponectin can be considered as a possible target of therapy. The objective is to check whether the initial concentration of adiponectin or its change during therapy is related to the effectiveness of treatment of coronary heart disease (CHD) in patients with metabolic syndrome (MS).

Methods: Thirty one patients with CHD and MS (aged 59.7+/-5.9 years, 21 females), receiving statins (27 patients) or fibrates (4 patients) for 2-3 years were selected for the study. The effectiveness of treatment was assessed by a changing in ECG, veloergometry (VEM), and plasma biochemical tests in this period of treatment.

Results: As expected, metabolic parameters (plasma lipoproteins, insulin concentration) have been improved during therapy, and plasma leptin and adiponectin concentrations were increased. Exercise tolerance performance has been enhanced as well. According to the VEM, change in the