

population compared to analysed female group (22.38% vs. 14.03%; $p < 0.001$). Untreated males had higher prevalence of an abnormal triglyceride concentrations (37.7% vs. 27.2%, $p < 0.001$) and reduced HDL-C measurements than their untreated counterparts (13.6% vs. 12.9%, $p < 0.001$). However, increased waist circumference measurement was apparent in untreated female group compared to male participants who received no treatment (55.6% and 39% $p < 0.001$).

Conclusions: Untreated hypertension was more common in males, who also had higher rates of abnormal triglyceride levels and lower HDL-C compared to females. However, untreated females showed a higher prevalence of increased waist circumference. These findings suggest gender-specific differences in cardiovascular risk factors among those with untreated hypertension.

P313 / #532

Poster Topic: AS03 DYSLIPIDEMIA AND RISK FACTORS / AS03.06 Gender and cardiovascular risk

Influence of selenium supplementation on lipid exchange in patients with metabolic-associated liver disease

Iryna Tverezovska, Natalia Zhelezniakova

Internal Medicine 1, Kharkiv National Medical University, Kharkiv, Kharkiv Region, Ukraine

Background and Aims: Metabolic associated liver disease (MASLD) is often associated with dyslipidemia and oxidative stress, and can provoke hypertension (HTN) progression. Selenium performs various biological roles, especially protection against oxidative DNA damage caused by hydrogen peroxide and lipid hydroperoxide. **Aim.** Determine the therapeutic influence of sodium selenite on lipid exchange in patients with SLD and concomitant HTN.

Methods: The study included: main group — 49 patients with MASLD and HTN; comparison group — 51 patients with isolated MASLD. The median age was 51.0 [45.0; 56.0] years ($p_{1-3} = 0.980$) and 52.0 [47.0; 54.0] years ($p_{1-2} = 0.610$) respectively. Levels of total cholesterol (TC), triglycerides (TG), high-density lipoproteins (HDL), low-density lipoproteins (LDL) and very low-density lipoproteins (VLDL) were determined by enzymatic colorimetric method. Selenium levels were measured by immunoassays (ELISA Kit). IBM SPSS 25.0 for Windows was used for statistical calculations.

Results: Median BMI in all study groups corresponded to normal or increased body weight. Additionally, to standard MASLD treatment, 22 patients of the main group and 29 patients of the comparison group were prescribed 300 µg/day of sodium selenite during the first 14 days, followed by a maintenance dose of 100 µg/day for the next 2 months. Model for predicting the comorbid course of MASLD and HTN were calculated too. The studied parameters are listed in Table 1, table 2 and figure 1.

Table 1

Comparison of lipid markers changes in patients with selenium supplementation, Me [IQR]

Index	Groups	Before treatment	After treatment	p
TC, µmol/L	MASLD+HTN	5.78 [3.9; 9.74]	5.11 [4.0; 8.34]	< 0.01
	MASLD	4.99 [4.26; 5.71]	4.68 [3.0; 6.56]	0.078
TAG, µmol/L	MASLD+HTN	1.45 [0.53; 2.76]	1.23 [0.67; 2.56]	0.678
	MASLD	2.22 [1.67; 2.68]	2.11 [0.67; 2.98]	0.321
HDL, µmol/L	MASLD+HTN	1.22 [0.81; 1.60]	1.56 [1.03; 1.99]	0.358
	MASLD	1.23 [1.03; 1.36]	1.56 [1.08; 1.99]	0.05
LDL, µmol/L	MASLD+HTN	3.67 [0.96; 7.48]	3.58 [3.00; 6.88]	0.05
	MASLD	3.30 [2.56; 3.82]	3.11 [2.08; 4.96]	0.687
VLDL, µmol/L	MASLD+HTN	0.75 [0.24; 1.12]	0.82 [0.33; 1.03]	0.002
	MASLD	0.62 [0.47; 0.67]	0.57 [0.33; 0.98]	0.099
KA, Units	MASLD+HTN	3.88 [2.64; 5.53]	2.42 [1.43; 4.38]	0.087
	MASLD	3.45 [2.54; 3.90]	2.05 [1.58; 4.25]	0.128

Table 2

Predictive characteristics of the developed model

Index	Value	Sensitivity, %	Specificity, %
The highest sensitivity	-4.1122	100.0	61.2
The highest specificity	0.5760	94.1	100.0
Optimal value	-0.5863	96.1	89.8
Model	MASLD+HTN = 19.826 – – 0.623 × ALT, U/L + 0.163 × Selenium, mkg/L – – 4.925 × VLDL, µmol/L		

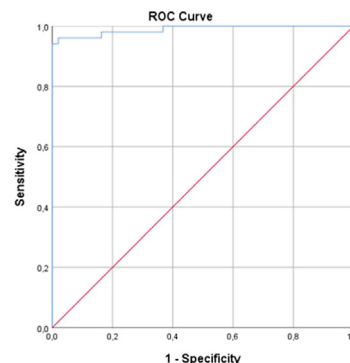


Figure 1 ROC curve of the model for predicting the comorbid course of MASLD and HTN (AUC = 0.988 [95.0 % OR 0.973–1.000], $p < 0.001$)

Conclusions: According calculated model, it can be assumed that changes in VLDL and selenium levels can lead to a higher risk of developing concomitant HTN in patients with MASLD. Adding selenium-containing drugs to standard MASLD treatment recommendations, especially in patients with concomitant HTN, can reliably improve outcomes, which is a compelling direction for further researches.

P314 / #905

Poster Topic: AS03 DYSLIPIDEMIA AND RISK FACTORS / AS03.06 Gender and cardiovascular risk

Targeted NMR metabolomics reveals sex-specific markers of myocardial infarction

Sandra Vladimirov Sopic¹, Tamara Ratkovic¹, Jelena Munjas¹, Pol Torne², Núria Amigó³, Dane Cvijanovic⁴, Aleksandar Davidovic⁴, Dimitris Kardassis⁵, Marko Milanov⁴, Iva Perovic Blagojevic⁶, Aleksa Petkovic⁶, Christos Tsatsanis⁷, Luka Vukmirovic⁴, Paolo Magni⁸, Miron Sopic⁹

¹ Department Of Medical Biochemistry, Faculty of Pharmacy, University of Belgrade, Belgrade, Serbia; ² Biosfer Teslab, Reus, Spain; ³ Biosfer Teslab, Reus (Tarragona), Spain; ⁴ KBC Zvezdara, Belgrade, Serbia; ⁵ Laboratory Of Biochemistry, Laboratory of Biochemistry, University of Crete Medical School, Crete, Greece; ⁶ Clinical-Hospital Centre “Dr Dragiša Mišović-Dedinje”, Belgrade, Serbia; ⁷ Laboratory of Clinical Chemistry, Department of Laboratory Medicine, Medical School, University of Crete, Crete, Greece; ⁸ Department Of Pharmacological And Biomolecular Sciences, University of Milan, Milano, Italy; ⁹ Medical Biochemistry, Faculty of Pharmacy, University of Belgrade, Beograd, Serbia

Background and Aims: Acute myocardial infarction (AMI) exhibits pronounced sex-specific differences in pathophysiology, with distinct variations in clinical presentation that complicate diagnosis and treatment for both sexes. Investigating these differences at the metabolic level is essential for advancing personalized diagnostic and therapeutic approaches. This study utilizes targeted NMR metabolomics to investigate sex-specific differences in metabolic profiles in patients with AMI, focusing on markers of lipid metabolism, inflammation, and energy pathways.

Methods: This study included 79 women (46 with stable CAD and 33 with AMI) and 121 men (54 with stable CAD and 67 with AMI). Targeted NMR metabolomics was employed to investigate sex-based differences across a