

Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active. fluorescent analysis in plasma collected from 93 men and 122 overweight and obese subjects after an overnight fast.

Results: Plasma levels of VEGF-A and IGF-1 but not HGF were elevated in group with overweight and obese subjects (p<0,001). Patients with severe obesity had elevated serum levels of HGF and VEGF, while IGF-1 was slightly increased in patients with BMI>35 kg/m2 (P=0.017). The plasma level of G-CSF, GM-CSFdid not differ between all the groups, but was slightly higher than the control group by in 1.3 times for GM-CSF in patients with obesity (p=0,002). In univariate analysis, VEGF-A had positive correlations with BMI (p<0.001), HGF (p=0.012) and IGF-1 (p=0.042). Plasma levels of HGF had correlations with VEGF-A, hsCRP (p=0,001), cystatin C (p=0,015), uric acid (p=0,024) and negatively with eGFR by CKD-EPIcreatinin-cystatinC formula (P=0.028). In a multivariate analysis between all study parametrs only HGF was independent determinant of higher PWV.

Conclusions: Increased levels of vascular growth factors are present in overweight and obese subjects and may contribute to previously increased risk of metabolic disorders in gouty subjects with obesity. Circulating levels of HGF may be a new marker of cardiovascular damage in patients with gout.

EP563 / #1245, TOPIC: ASA04 - CLINICAL VASCULAR DISEASE / ASA04-02 ENDOTHELIAL DYSFUNCTION; CLINICAL ASSESSMENT, POSTER VIEWING SESSION.

COMPARISON OF CARDIOVASCULAR RISK IN IDIOPATHIC INFLAMMATORY MYOPATHY WITH GENERAL POPULATION – PRELIMINARY DATA FROM A SINGLE-CENTRE CROSS-SECTIONAL STUDY

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Background and Aims : Idiopathic inflammatory myopathies (IIM) and associated inflammation, limited mobility, glucocorticoid treatment, can have a negative impact on metabolic disease, atherogenesis, and cardio-vascular risk. The aim was to assess the cardiovascular risk in IIM and healthy controls (HC) and the association with disease-specific features.

Methods: 39 IIM and 39 age-/sex-matched HC with no history of manifest cardiovascular disease were included. Disease activity (MITAX), damage (MDI), muscle involvement (MMT-8) were evaluated, comorbidities and current treatment recorded. Examination of CIMT, PWV, ABI, body composition (densitometry, bioelectric impedance), physical activity (HAP questionnaire) and the CV risk (by SCORE for European population) was performed. Data are presented as median (IQR).

Results: Baseline characteristics shows Table 1. No significant difference in blood pressure, ABI, PWV, CIMT and risk of fatal CV events (SCORE) was observed between IIM and HC. IIM had higher plaques count, significantly lower physical activity than HC (Table 2). In IIM, blood pressure (as MAP) correlated positively with age, BMI, inflammation (CRP, C3), triglycerides, atherogenic index and body fat %, negatively with albumin and HDL-C. Decreased values of ABI were associated with low HDL-C. Increased PWV was associated with age, disease duration, disease activity (MITAX), parameters of body composition and nutritional status. CIMT and plaque thickness were associated with disease duration (Table 3).

	Table 1: Baseline characteris	stics		8
	IIM (6	= 39)		HC (n = 39)
Gender, n (%): female / male	32 (82) /	32 (82) / 7 (18)		32 (82) / 7 (18)
Age (years); median (IQR)	56.0 (47.3	7 - 64.1)		56.0 (45.3 - 64.2)
BMI (kg/m ²); median (IQR)	25.9 (23.2	2 - 31.1)		27.5 (23.9 - 31.7)
Disease subtype, n (%): DM / PM / IMNM	14 [36] / 18 ((46) / 7 (18)		
Disease duration (years); median (IQR)	4.84 (1.96	5 - 8.83}		
Disease activity (MITAX); median (IQR)	0.13 (0.06	5 - 0.29)		
Disease damage (MDI); median (IQR)	0.05 (0.03	5 - 0.08)		
MMT-8; median (IQR)	64 (54	= 70)		
CKP (mg/L); median (IQK)	3.0 [1.4	= 5.07		
ESK [mm/n]; median (IQK)	3.0 (1.3 = 9.4)			
LD (ukat/L): median (IOR)	3.7 (3.4 = 5.2)			
Myoglobin (ug/L): median (IOR)	93.6 (60.4 - 250.2)			
Glycaemia (mmol/L); median (IQR)	5.2 (4.8 - 5.8)			
Current dose of GC - prednisolone	66/23	r		
equivalent dose (mg/day); median (IQR)	6.5 (3.75 - 15)			
IIM-associated clinical manifestations, n	35 (88) / 7 (18) / 5 (13) / 8 (21) / 10 (26) / 5 (13))/5{13}/16	
(%): MW / OD / SR / MH / RP / A / ILD / CI	(41) /	3 (8)		6
Autoantibodies (positive), n (%):				
ANA / MI-2 / TIF-1y / CADM-140 / SAE /	24 (62) / 5 (8) / 5 (8) / 0 (0	9/0(0)/0(0) / 3 (8) / 10	
P140/SKP/J0-1/PM-3CL/KNP/KU/RO/ HMGCP	(20)/5(15)/5(15)/0(0	// 10 (41) /	3 [0] / 2 [5]	
Treatment, n (%):				
GC / MTX / AZA / CSA / CPA / LEF / MMF	36 (92) / 11 (28) / 5 (21) / 5	5 (13) / 2 (5)	/ 2 (5) / 1 (3)	
Arterial hypertension (treated), n (%)	15 (38)		1
Diabetes mellitus, n (%):	2.01.14.1			
Untreated / PAD / Insulin treatment	5 (8) / 1 (3)/1(3)		8
Statin use, n (%): Current / Previous /	0.001/4.01	01/1/31		
Other current hypolipidemic drugs	s (s) - (s	call a dal		6
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Conclusions: No significant differences in cardiovascular risk between our IIM and HC were detected. In IIM, cardiovascular risk factors were associated with age, disease duration, glucocorticoids dose, lipidogram and body composition. No association with decreased physical activity was observed. Acknowledgement: AZV-NV18-01-00161A, MHCR-00023728, SVV-260373

EP564 / #1030, TOPIC: ASA04 - CLINICAL VASCULAR DISEASE / ASA04-02 ENDOTHELIAL DYSFUNCTION; CLINICAL ASSESSMENT, POSTER VIEWING SESSION.

FLOW-MEDIATED DILATION OF THE BRACHIAL ARTERY IN PATIENTS WITH OBESITY AFTER COVID-19

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Background and Aims : Endothelial dysfunction plays an important role in the pathogenesis of the novel coronavirus infection (COVID-19) and its complications. The aim of the study was to assess the contribution of obesity to the pathogenesis of endothelial dysfunction as one of the risk factors of a more severe disease. **Methods:** We examined 19 patients with mild or moderate hypertension 1 month after their recovery from moderate COVID-19 (11m/8f, aged 45.4 ± 9.0 years, without diabetes mellitus, non-smokers). 11 patients with hypertension had obesity (BMI \geq 30 kg/m²) and 8 had normal body weight (BMI \leq 25 kg/m²). We compared the endothelium-dependent flow-mediated dilatation (FMD) of the brachial artery in response to reactive hyperemia in the recovered group and in 20 age- and gender-matched healthy controls without cardiovascular risk factors.

Results: The FMD in 19 pts with hypertension was significantly lower than in healthy controls ($5.3\pm3.4\%$ vs $9.5\pm3.9\%$, p<0.05). FMD in pts with hypertension and obesity was significantly lower than in patients with hypertension and normal body weight ($3.9\pm1.9\%$ vs $7.3\pm3.7\%$, p<0.05) and in healthy controls (p<0.05). BMI, SBP, DBP, TC and TG levels were significantly higher in patients with hypertension and obesity than in participants with hypertension and normal body weight: 34.2 ± 3.9 vs 22.7 ± 2.8 kg/m2, 141.3 ± 10 vs 123.5 ± 17.3 mm Hg, 91.6 ± 10.1 vs 79.4 ± 12.8 mm Hg, 6.75 ± 1.88 vs 5.12 ± 0.82 mmol/l and TG 3.75 ± 3.0 vs 1.18 ± 0.24 mmol/l (all pvalues <0.05).

Conclusions: In conclusion, moderate COVID-19 led to a disruption of the functional state of the endothelium in patients with hypertension, which was more pronounced in patients with obesity.

EP565 / #876, TOPIC: ASA04 - CLINICAL VASCULAR DISEASE / ASA04-02 ENDOTHELIAL DYSFUNCTION; CLINICAL ASSESSMENT, POSTER VIEWING SESSION.

VASCULAR ENDOTHELIAL FUNCTION AS AN EARLY SIGN OF VASCULAR AGEING IN PATIENTS WITH METABOLIC SYNDROME

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Background and Aims : Objective is to evaluate signs of early vascular ageing, namely arterial stiffness, intima-media thickness and endothelial dysfunction, among people with metabolic syndrome by comparing the results of pulse wave velocity (PWV), intima-media thickness (IMT) and flow-mediated dilation FMD) techniques, respectively. Also, we aim to examine the correlation between these methods as well as relationship with cardiovascular risk factors.

Methods: The data of 4927 patients who were admitted to the Centre of Cardiology and Angiology at Vilnius University Hospital Santaros Klinikos was analysed. The patient cohort consisted of 2114 males and 2813 females aged 40-55 and 50-65, respectively. We evaluated the results of PWV, IMT and FMD techniques and their relationship with 6 cardiovascular risk factors.

Results: Endothelial dysfunction is more common among men than women (p<0,001). Abnormal values of FMD, PWV and IMT are associated with significantly higher frequency of atherosclerotic plaques in common carotid artery (p=0,001, p=0,01, p<0,001, respectively). There is a positive statistically significant correlation between total number of cardiovascular risk factors and both the extent of arterial stiffness (p<0,001) and intimamedia thickness (p<0,001). We also found that intima-media thickness is correlated with arterial stiffness (p=0,001), while values obtained by both PWV (p=0,001) and IMT (p=0,002) methods are negatively linked with results of FMD.



Correlation between FMD, IMT and PWV values.

TSD – flow mediated dilation (%), PWV – pulse wave velocity (m/s), IMS – intima-media thickness (um).

Conclusions: Endothelial function is less impaired in women than in men. However, the latter were found to be associated with less stiffened arteries, lower prevalence of atherosclerotic plaques and thinner intimamedia layers. There is a significant correlation between measures of endothelial dysfunction, arterial stiffness and intima-media thickness.

EP566 / #1366, TOPIC: ASA04 - CLINICAL VASCULAR DISEASE / ASA04-02 ENDOTHELIAL DYSFUNCTION; CLINICAL ASSESSMENT, POSTER VIEWING SESSION.

PHYSICAL ACTIVITY AND CARDIAC ARRHYTHMIAS IN PATIENTS WITH INOCA ON THE MANAGEMENT WITH RANOLAZINE

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Background and Aims : The **aim** of the study was to evaluate the effect of basic ranolazine therapy in INOCA patients on exercise stress test and Holter ECG monitoring.

Methods: 53 patients with INOCA were examined, including 17 men (32.7%) and 35 (67.3%) women, the average age was 57 (\pm 9.68) years. In addition to physical and laboratory examination, exersise stress test, Holter ECG monitoring were included in the examination of patients. Patients were divided into 2 groups: group I - patients who in addition to standard therapy received ranolazine at a dose of 1000 mg twice a day for 6 months, and group II patients with standard antianginal therapy. The examination was performed at 6-month follow-up.

Results: Before treatment in group I, the duration of the exercise test was 356.51 ± 180.24 s, and after treatment 414.32 ± 142.10 s (p = 0.03). In group II, the duration of the test before treatment was 361.4 ± 160.24 s, and after 380.5 ± 152.2 s (p= 0.15). The duration of the test differed significantly in group I after treatment of patients from group II after treatment of patients with a standard treatment (p= 0.04). In group I the frequency of ventricular arrhythmias: before treatment n=1142[30; 2012], after treatment n=729[23; 1420], in group II a significant difference between the number of extrasystoles before and after treatment not detected(n=1026[17; 1920], n=985[15; 1680], respectively) p= 0.18.