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Methods and Results: From 1998 to 2013, 10 cases of pulmonary embolism were found amongst BD patients in the department of internal medicine of Hedi Chaker Hospital. All these patients fulfilled International Study Group criteria for BD.

10 patients (all men, mean aged at 29.9±9.08 years) were diagnosed as having pulmonary embolism. This was inaugural in 7 cases. Peripheral venous thrombosis was present in 50% of patients; cardiac thrombosis was presented in 2 cases and pulmonary aneurysm in 2 patients. Pulmonary infarction has been noted in 3 cases. Pulmonary artery pressure may be elevated, and may indicate a poor prognosis. Mediastinal lymphadenopathy and mild pleural and pericardial effusions was also observed in 1 case. Protein C, protein S, antithrombin III and homocysteinemia levels were normal in all cases. One patient was positive for IgG anticardiolipin antibody. All our patients were treated successfully by anticoagulation therapy combined with high dose prednisone, colchicine and intravenous cyclophosphamide in 2 patients. . After a mean follow-up of 106± 49 months, 4 patients had a recurrence of pulmonary embolism and only 1 patient was dead.

Conclusion: Pulmonary embolism is one of the severe and worst prognostic manifestations of the BD. Our knowledge about pulmonary complications of Behçet's disease continues to evolve, but we need controlled trials for the management of the disease. The main goal should be to elucidate the pathogenesis and standardize the management according to the underlying pathologic process.

0299

Interleukins 33 and 1β, left ventricular geometry and diastolic dysfunction in hypertensive patients with obesity

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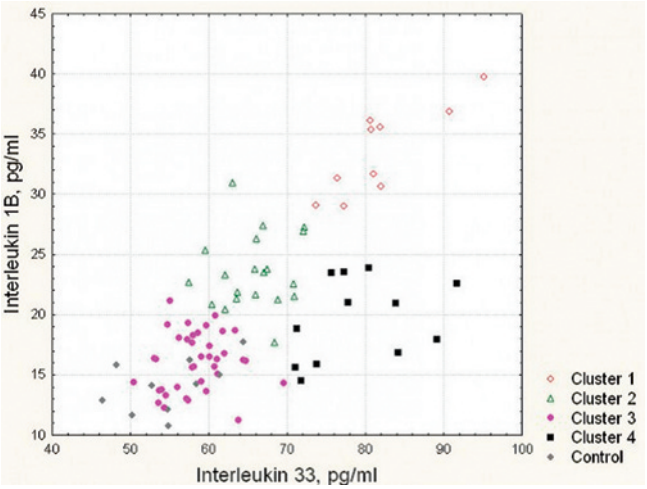
Purpose: To investigate interrelations between interleukin 33 (IL-33) and 1β (IL-1β) serum levels, left ventricular (LV) remodeling and diastolic dysfunction (DD) in hypertensive patients with obesity.

Materials and methods: 80 hypertensive patients (51 obese) underwent transthoracic echocardiography. LV geometric pattern by A.Ganau, E/A and E/E' ratios, pulmonary wedge pressure (PWP) by S.Nagueh were calculated. IL-33 and IL-1β serum levels were estimated using ELISA.

Results: IL-33 and IL-1β were higher in hypertensive patients (p<0,001), independently of BMI, and formed 4 clusters (see pic.) Cluster 1 was associated with the highest LV myocardial mass index (MMI) (160,5 (142,8; 185,8) g/m^2, p<0,05), highest prevalence of LV hypertrophy (LVH) (100,0%, 90,0% of concentric LVH), moderate decrease in E' velocity (9,95 (8,32; 10,60) cm/sec), relatively low PWP (9,23 (8,83; 13,03) mmHg) and 70,0% prevalence of LVDD (60,0% of type I). Cluster 2 had LVMMI of (116,9 (104,4; 163,1) g/m^2), 55,0% prevalence of LVH plus 30,0% of concentric remodeling, lowest E' (7,68 (6,50; 9,67) cm/sec, p<0,01), highest PWP (12,26 (10,72; 13,12) mmHg, p<0,05) and highest rate of DD (85,0%, 70,0% of type I). Cluster 4 was associated with MMI of 121,4 (111,7; 140,5) g/m^2, 66,7% rate of LVH (equal for concentric and eccentric variants), highest values of E' (11,04 (9,49; 12,00) cm/sec), lowest PWP (9,07 (7,04; 11,51) mmHg) and lowest prevalence of LVDD (66,7%, 50,0% of type I). Cluster 3 (p>0,05 vs control group) had intermediate characteristics of mentioned parameters.

Conclusion: Significant increase in IL-33 and IL-1β levels in hypertensive patients independently of BMI was revealed. Increase in both cytokines' levels was associated with highest rates of LVH and DD. Prevalent increase in IL-1β was connected to the worst state of diastolic function despite low rates of hypertrophy. Prevalent increase in IL-33 had the most favorable influence on the severity of LVH as well as diastolic filling (figure above).



Abstract 0299 – Figure

0383

The peculiarities of structural and functional state of myocardium and daily blood pressure profile in hypertensive patients with diabetes mellitus

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Purpose: To establish the relationship between structural and functional parameters of the left ventricle (LV) and daily blood pressure (BP) profile in patients with arterial hypertension (AH) of II stage comorbid with type 2 diabetes mellitus (DM2).

Methods: 68 patients (32 men and 36 women, mean age 49,6±5,2 years); 32 – with isolated hypertension (group 1), 36 – with hypertension and DM2 (group 2) were examined. We evaluated the data of transthoracic echocardiography and parameters of ambulatory blood pressure monitoring.

Results: Patients of the 1st group had a significant increase of the LV posterior wall dimension (LVPWd) – 14% (p < 0,05) and left atrial size – 17% (p < 0,05). In patients of the 2nd group a direct correlation between BP variability and LVPWd (r = 0,67; p <0.05) was revealed; as well as inverse correlation between daily average BP variability and a maximum velocity of early wave of mitral inflow (r =–0,51; p <0,05).

Conclusions: In patients with hypertension comorbid with type 2 diabetes mellitus the following changes can be observed: the increase of BP variability, predomination of concentric left ventricular hypertrophy (65% of patients) over the eccentric one (29% patients) with the formation of diastolic dysfunction and impaired LV relaxation (51% of patients).

0430

Features of carbohydrate metabolism, cytokines activity and I/D gene ACE polymorphism at patients with arterial hypertension and overweight

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The purpose of our research was to study features of carbohydrate metabolism, activation of the pro-inflammatory cytokine-interleukin-18 (IL-18) and anti-inflammatory cytokine-interleukin-10 (IL-10), I/D gene ACE polymorphism at patients with arterial hypertension and overweight.Design and Methods:103 hypertensive patients were examined, which have been divided

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into 2 groups depending on body mass index (BMI):1st group-24 patients with BMI less than 25, the 2nd group-79 patients with BMI more than 25. The control group – 10 almost healthy subjects.

Results: At patients of the 2nd group reliable increase of SBP and DBP is noted-162.5 mmHg and 100.0 mmHg, $p<0.05$. The analysis of indicators of a carbohydrate exchange showed HbA1c increase at patients of the 1st and 2nd groups in comparison with control-6.97 (3.9-11.6)%, 6.5 (3.7-12.4)% and 5.1 (3.6- 8.1)% respectively, p=.0321.In the 1st group ID genotype-9 patients (35.62%), DD genotype – 13 patients (53.42%); in the 2nd group – ID genotype-37 patients (46.61%), DD genotype-27 patients (30.77%), p=.03821. Besides, at patients of the 2nd group statistically significant increase of level anti-inflammatory IL-10-89.3 (61.3-97.5) pg/ml in comparison with the 1st group and group of control-79.5 (58.8-93.0) pg/ml and 82.0 (58.8-97.5) pg/ml respectively, ρ =.0001 against increase of level pro-inflammatory IL-18 in both groups (173.0 (110.0-210.0) pg/ml 1st group and 176.0 (125.0-205.0) pg/ml – the 2nd group, ρ =.0001) was noted.

Conclusion: The obtained data allow to assume that at patients with arterial hypertension and overweight against prevalence of adverse genotypes of ID and the DD polymorphism of I/D gene ACE polymorphism heavier current of arterial hypertension is observed that is characterized by higher of blood pressure levels and of a carbohydrate metabolism parameters such as HbA1c is noted. Increase of level IL-10 against increase IL-18 at patients with arterial hypertension and overweight, probably, has compensatory character.

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Topic 06 - Hypertension / Vascular disease

Topic 07 - Basic science

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