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Title: The lymphocyte subset analysis in patients with arterial hypertension and severe obstructive sleep apnea syndrome

Eugenia 30105 Elfimova eelfimova@gmail.com [1], Alexander 30192 Litvin alelitvin@yandex.ru MD [1] and Kirill 30193 Zykov elf13_13@mail.ru MD [2]. [1] Systemic Hypertension, Russian Cardilogy Research and Production Complex, Moscow, Russian Federation and [2] Laboratory of immunopathology, Russian Cardilogy Research and Production Complex, Moscow, Russian Federation .

Body: Preliminary data of the study investigating peculiarities of inflammatory response and endothelial function in pts with arterial hypertension (AH) and obstructive sleep apnea syndrome (OSAS). The aim: The aim was to evaluate the count of lymphocyte subset in pts with AH and OSAS. Design and Methods: In 7 male pts with AH (office BP 151 ±5,2/ 91,4 ± 8,4 mmHg) and severe OSAS (AHI 64,8 ±15) and otherwise healthy, aged 39±11 years phenotyping of lymphocytes was performed by flow cytometry (Cytomics FC500, Beckman Coulter, USA). Results: pts with AH and severe OSAS were examined for levels for following parameters see the table.

Parameters of cellular immunity in patients with AH and severe OSA

	Results	Normal values	p
CD3+	77,2±8,69	72,9±9,1	0,2398
CD3+/CD4+	45,8±7,58	42,6±8,4	0,3444
CD3+CD8+	26,7±7,37	25,0±6,0	0,4972
CD3-CD(16+56)	7,41±3,10	8,4±3,9	0,5235
CD3+CD(16+56)	7,64±5,22	5,0±2,3	0,0219
CD19+	13,2±8,45	10,8±5,7	0,3308
CD3+CD25+	3,21±1,17	3,5±1,5	0,6263
CD50+	97,8±2,34	90,0±10,0	0,0461
CD3-HLA-DR+	14,4±7,97	8,5±3,3	0,0007
CD3+HLA-DR+	2,65±1,64	6,0±3,1	0,0224
CD3+CD95+	32,3±10,7	42,0±9,0	0,0116
CD4/CD8	1,94±0,84	1,8±0,8	0,6680

The levels of D3-HLA-DR+ and CD3+CD(16+56) and CD 50+ were statistically higher vs average normal values, whilst CD3+HLA-DR+, CD3+CD95+ were significantly lower. Conclusion: These data suggest, that both CD4+ and CD8+ T-cell compartments, as well as the regulation of CD95+ expression on T-cells, should be targeted for further study. Knowing of the underlying inflammatory mechanism could lead to understanding of disease progression and development of cardiovascular complications.