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Title: Bosentan influence on cellular immunity parameters in patients with idiopathic arterial pulmonary hypertension

Mrs. Tamila 24950 Martynyuk trukhiniv@mail.ru ¹, Mr. Kirill 24951 Zykov trukhiniv@mail.ru ¹, Mrs. Olga 24952 Antonova trukhiniv@mail.ru ¹, Mrs. Olga 24953 Arkhipova trukhiniv@mail.ru ¹, Mrs. Ekaterina 24954 Kobal trukhiniv@mail.ru ¹, Mr. Valery 24967 Masenko trukhiniv@mail.ru MD ¹, Mr. Sergey 24971 Nakonechnikov trukhiniv@mail.ru MD ¹ and Mrs. Irina 25097 Chazova trukhiniv@mail.ru MD ¹. ¹ Department of Systemic Hypertension, Russian Cardiology Research-and-Production Complex, Moscow, Russian Federation, 121552 .

Body: Aim: to assess the influence of endothelin receptor antagonist Bosentan on cellular Immunity parameters in pts with idiopathic pulmonary arterial hypertension (IPAH). Methods: In the single-center comparative study we included 35 pts aged 35,2±9,6ys with IPAH confirmed by RHC (WHO Functional Class (FC) II-IV) without systemic inflammation signs. On top of stable therapy for at least 3 months Bosentan therapy was started 62,5 mg twice daily for 4 wks. At wk4 the patients were randomized 1:1 by the envelope method to have bosentan 125 or 250 mg/day. At baseline, at wk3 and wk12 visits the pts underwent the clinical and lab assessment (FC, 6-minute walking test (6-MWT), Echo, RHC, routine lab+CD-markers assessed by (fluorometry (Beckman Coulter FC 500). Results: All cellular immunity parameters of IPAH pts remained within normal limits.

Parameter	Group 1	Group 1	Group 1	Group 2	Group 2	Group 2
	(bosentan 125 mg)	(bosentan 125 mg)	(bosentan 125 mg)	(bosentan 250 mg)	(bosentan 250 mg)	(bosentan 250 mg)
	Baseline	Wk3	Wk12	Baseline	Wk3	Wk12
CD 19+	10.3±2.8	9.5±3.1#*	10.9±3.1#	7.8±4.4	6.4±1.6*	7.7±2.5*
CD3+HLA-DR+	5.5 (2.2-7.5)	4.0 (2.5-9.0)	2.4 (1.8-4.3)#	7.3 (5.2-9.6)	6.2 (5.6-9.2)	5.9 (4.6-8.8)*
CD3-HLA-DR+	11.2±2.4	10.8±2.5	11.9±2.7#*	9.0±4.2	8.6±4.8	8.6±1.9*
CD3+CD95+	37.2±12.7#	29.9±18.9#	33.5±16.5	47.5±9.3	46.4±13.6	32.9±18.6

* p<0,05 vs baseline, # p<0,05 group 1 vs group 2

Conclusion: 12wk therapy with Bosentan changed CD-markers levels. The daily dose of 125mg resulted in

the increase of B-lymphocytes levels and slight decrease of activated T lymphocytes, In patients treated with Bosentan 250 mg we found decreased numbers of activated B - and T-lymphocytes.