

European Respiratory Society Annual Congress 2013

Abstract Number: 3793

Publication Number: P2612

Abstract Group: 4.3. Pulmonary Circulation and Pulmonary Vascular Disease

Keyword 1: Pulmonary hypertension **Keyword 2:** Imaging **Keyword 3:** Treatments

Title: Quantitative estimation of lung perfusion scintigraphy in patients with idiopathic pulmonary arterial hypertension, receiving bosentan treatment

Mrs. Olga 23308 Arkhipova olga_ark@list.ru ¹, Mrs. Tamila 23309 Martynyuk olga_ark@list.ru ¹, Mrs. Ludmila 23310 Samoilenko olga_ark@list.ru MD ¹, Prof. Vladimir 23311 Sergienko olga_ark@list.ru MD ¹ and Prof. Irina 23312 Chazova olga_ark@list.ru MD ¹. ¹ Department of Systemic Hypertension, Russian Cardiology Research and Production Complex, Moscow, Russian Federation .

Body: Aim: To assess 12 wk bosentan therapy influence on lung perfusion with technetium-99mm macroaggregated albumin in pts with idiopathic pulmonary arterial hypertension (IPAH). Methods: The study included 15 pts with IPAH: 13 f/2m, mean age 40,4±11,9 yrs, functional classes (WHO FC) II-III, mean disease duration 2,9±2,5 yrs. All pts accepted Bozentan in a dose of 125 mg at day. After 4 wks Bozentan's dose was enlarged to 250 mg at day. 6-minute walking test (6MWT), right heart catheterization (RHC), lung scanning with 111-MBq dose of 99mTc-labeled macroaggregated albumin were performed at baseline and after 12 wks of therapy. Results: In all IPAH pts Bosentan therapy resulted in clinical and hemodynamic improvement. We found the significant increase of 6MWD (+48,8m); cardiac output (+0.8 l/min) by RHC, decrease of mean pulmonary arterial pressure (-7,8 mm Hg), pulmonary vascular resistance (-627 din*sec/sm5). We didn't detect significant changes of lung perfusion.

Lung perfusion after bosentan 12-wks treatment

		baseline	after 12 wks
Intensity of the account 99mTc-MAA	right lung	225541,3 ±39329,5	224571,7 ±24754,2
	left lung	183102,3 ±38432,7	196806,5 ±38207,8
Upper Zone Vesta, %	right lung	19,3±2,2	19,4±2,6
	left lung	23,7±3,4	25,0±3,7
Mean Zone Vesta №2, %	right lung	43,8±3,2	43,1±3,7
	left lung	40,6±3,7	40,5±4,1
Lower Zone Vesta, %	right lung	35,4±5,1	36,3±5,2
	left lung	34,1±5,5	34,2±4,0
U/L-Q, %	right lung	0,52 (0,45-0,63)	0,52 (0,45-0,68)
	left lung	0,69 (0,62-0,76)	0,81 (0,64-0,86)

Conclusions: In spite of significant improvement of functional capacity and hemodynamic parameters 12 wk bosentan therapy did not influence lung perfusion at pts with IPAH.