

P1997**The effects of long-term treatment with sympathetic nervous system blockers on diastolic function in patients with resistant hypertension and heart failure with preserved ejection fraction**

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Background The sympathetic nervous system (SNS) plays an important role both in the pathogenesis of resistant hypertension (HTN) and heart failure (HF). The treatment of HF with preserved ejection fraction (HFpEF) and resistant HTN remains a challenge for contemporary cardiology. Moreover, there are insufficient clinical trials demonstrating the efficacy of some remedies in this category of patients. **Purpose** Evaluation of diastolic function in patients with resistant HTN and HFpEF under the influence of long-term medication with sympathetic nervous system blockers.

Methods 100 patients with essential HTN gr.3 and HFpEF, without comorbidities, after a 3-week treatment with standardized treatment with Losartan, Amlodipine

and Indapamide and confirmation of their resistance were randomized in two groups, depending on the medication supplemented to the previously administered: group I (M) – selective I1-imidazoline agonist Moxonidine and group II (B) – cardioselective beta-blocker Bisoprolol. All patients were evaluated by transthoracic echocardiography at baseline, six and twelve months follow-up.

Results The authentic improvement in diastolic function parameters occurs from 6 months of continued medication with both SNS blockers with superior potency in the Bisoprolol treatment group, beneficial effect maintained until the end of the surveillance period. The most sensitive parameters have proven to be LAVI and TR velocity (Tab.).

Conclusion Long-term treatment with SNS blockers demonstrated a statistically significant improvement in diastolic function parameters with a superior potency of Bisoprolol in this group of patients.

Diastolic function parameters							
Variables	baseline	p	6 months	p	12 months	p	
E/A	Group I	0.78±0.04	> 0.05	0.88±0.08	> 0.05	0.82±0.05	< 0.05
	Group II	0.72±0.03	0.77±0.03	0.78±0.02			
e _m ′, cm/s	Group I	4.5±0.3	< 0.05	4.8±0.3	< 0.01	4.8±0.3	< 0.01
	Group II	3.6±0.2	4.0±0.2	4.1±0.2			
E/ e _m ′	Group I	13.4±0.7	> 0.05	13.0±0.6	< 0.01	13.0±0.7	< 0.01
	Group II	14.7±0.4	14.2±0.3	13.9±0.3			
LAVI, ml/m ²	Group I	38.2±0.7	> 0.05	37.0±0.6	< 0.001	36.0±0.6	< 0.001
	Group II	37.8±0.6	36.6±0.5	36.0±0.4			
TR velocity, m/sec	Group I	3.03±0.02	<0.05	2.94±0.001	<0.001	2.93±0.04	< 0.001
	Group II	2.96±0.02	2.9±0.02	2.86±0.01			