

Is there any influence of elevated diastolic blood pressure on ventricular arrhythmias in hypertensive patients with left ventricular hypertrophy?

Juraj Kunišek^{1*}, Leon Kunišek²

¹Special Hospital for Medical Rehabilitation, Crikvenica, Croatia

²University of Rijeka School of Medicine, University Hospital Centre Rijeka, Rijeka, Croatia

Objective: To investigate the prevalence of ventricular arrhythmias in a patient with isolated systolic hypertension (ISHT) and left ventricular hypertrophy (LVH) in comparison to patients with systolic and diastolic hypertension and LVH.

Patients and Methods: 192 (87 men) patients with essential hypertension and LVH were divided into two groups: 98 patients with ISHT and 94 patients with systolic and diastolic hypertension. After discontinuing all medications for a period of 48 hours, the blood pressure was measured, electrocardiography, echocardiography, Holter monitoring and bicycle ergometry were performed. The number of ventricular arrhythmias was recorded. Antihypertensive drugs and the duration of previous treatment were taken into consideration.

Results: Isolated systolic hypertension (systolic blood pressure >140 mmHg and diastolic blood pressure <90 mmHg)

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*Address for correspondence: Thalassoterapia Crikvenica, Gajevo šetalište 21, HR-51260 Crikvenica, Croatia.

Phone: +385-99-694-1500

E-mail: juraj_kunisek@net.hr

Table 1. Numerical review of patients.

No of patients		No of patients with				p
		ISHT	%	SH+DH	%	
Total	192	98	(51)	94	(49)	NS
Man		47	(54)	40	(46)	
Women		51	(49)	54	(51)	

ISHT=isolated systolic hypertension, SH=systolic hypertension, DH=diastolic hypertension.

was recorded in 98 patients (51%), 47 men and 51 women (**Table 1**). The frequency of ventricular arrhythmias did not differ according to Lowens classification categories I-II and III-IV in patients with and without isolated systolic hypertension (**Table 2**). There was no difference in the treatment duration between the groups ($p=0.858$), or in the type of the applied medication. We found 44% complex ventricular arrhythmias in patients with ISHT. No significant difference was found in the frequency of ventricular arrhythmias between the groups that were observed.

Conclusions: No significant difference was found in the frequency of ventricular arrhythmias in patients with isolated systolic hypertension and LVH in comparison to patients with systolic and diastolic hypertension and LVH. Diastolic blood pressure does not seem to have any influence on the frequency of ventricular arrhythmias in such patients.

KEYWORDS: isolated systolic hypertension, left ventricular hypertrophy, ventricular arrhythmias.

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Table 2. Frequency of ventricular arrhythmias in patients with and without isolated systolic hypertension.

	SH+DH		ISHT		Total	p
	No	%	No	%		
Lowen I-II	98	(63)	20	(56)	118	0.419
Lowen III-V	58	(37)	16	44)	74	

SH=systolic hypertension, DH=diastolic hypertension, ISHT=isolated systolic hypertension.