

changes in blood pressure parameters (SBP, DBP, PBT, and MDP). The average blood pressure value at rest were  $132,1 \pm 3,3$  mmHg SBP and  $83,4 \pm 2,1$  mmHg for DBP. The second, hypotonic type of MRSACO response (60% of the examined subjects,  $n=72$ ) was characterised by a significant ( $P<0,05$ ) decrease in SBP, DBP, PBT, and MDP due to compressive influence on the mechanoreceptor structures of the abdominal cavity organs.

**Conclusions.** Effects of combined antihypertensive therapy with angiotensin-converting enzyme (ACE) inhibitors and a selective imidazoline receptor agonist on the functional state of the blood pressure regulation system in male patients with hypertension (CH) stage II with a normal body mass index were investigated. Combined antihypertensive therapy with the use of an ACE inhibitor (perindopril) and an agonist of imidazoline receptors (moxonidine) makes it possible to achieve target blood pressure levels and has a positive effect on the functional state of the blood pressure regulation system. The developed such functional test can be used to control the adequacy and efficacy of antihypertensive therapy.

### **Predictors of hospitalisation caused by chronic heart failure decompensation in elderly with arterial hypertension: a six-month survey in a real-life cohort**

L.V. Sapozhnychenko, O.O. Khanyukov,  
O.V. Smolianova

Dnipro State Medical University, Dnipro, Ukraine

**Background.** Chronic heart failure (CHF) is one of the leaders among chronic ambulatory care-sensitive conditions in terms of hospitalisation frequency and its associated cost, with the most affected age group being the elderly. Therefore, finding predictors of CHF decompensation that are easy to use in outpatient settings is crucial.

**Purpose.** To determine the factors that increase the likelihood of being hospitalised because of decompensation of CHF associated with arterial hypertension (AH) in the elderly in real-life ambulatory settings.

**Methods.** The study included 93 ambulatory patients diagnosed with CHF caused by AH. Their

median age was 64 [62; 68] years, male proportion – 38 % (95 % CI 28–48 %). We collected the demographic data, clinical information (including analysis of patient's medical notes to assess estimated glomerular filtration rate according to the Chronic Kidney Disease Epidemiology Collaboration equation (eGFR) during the previous year), and results of actual eGFR. We evaluated the exercise tolerance with the 6-minute walk test (6MWT). To assess the quality of life (QoL), all patients filled out the Minnesota Living with Heart Failure questionnaire (MLWHFQ). The primary endpoint in our study was hospitalisation caused by CHF decompensation in the next six months. We used univariate logistic regression to calculate the odds ratio.

**Results.** During the follow-up period, 21 of 93 patients were hospitalised for CHF (23 % (95 % CI 15–32 %)). If compared with non-hospitalised, hospitalized patients had a longer duration of AH (10 [8; 11] vs 8 [7; 10] years,  $p=0,02$ ), a higher median of systolic blood pressure (SBP) (149 [143; 152] vs 142 [137; 148] mm Hg,  $p<0,01$ ), covered the shorter distance in the 6MWT (287 [282; 311] m vs 364 [309; 404] m,  $p<0,01$ ), scored more according to MLWHFQ (49 [44; 57] vs 40 [30; 47] points,  $p<0,01$ ). The difference was found in eGFR level – 59,8 [56; 70,2] vs 69,9 [64,2; 79,7] ml/min/1,73 m<sup>2</sup>,  $p<0,01$ , and proportion of patients with eGFR  $<60$  ml/min/1,73 m<sup>2</sup> – 62 % (95 % CI 41–79 %) vs 19 % (95 % CI 11–31 %),  $p<0,01$ , for hospitalised and non-hospitalised patients respectively. ROC analysis found cut-off values connected with hospitalisation that were  $>41$  points for MLWHFQ and  $\leq 311$  m for 6MWT. In our study the following variables were associated with the primary endpoint: SBP  $\geq 140$  mm Hg – OR 6,05 (95 % CI 1,28–28,6), eGFR  $<60$  ml/min/1,73 m<sup>2</sup> – OR 6,73 (95 % CI 2,34–19,35), QoL  $>41$  points – OR 8,4 (95 % CI 2,27–31,1), 6MWT  $\leq 311$  m – OR 11,1 (95 % CI 3,3–36,88).

**Conclusions.** The result suggests that in the studied cohort of patients, the hospitalisation likelihood because of CHF decompensation increased substantially with uncontrolled AH and reduced GFR ( $<60$  ml/min/1,73 m<sup>2</sup>), and also if MLWHFQ scores exceeded 41 and the distance in 6MWT was  $\leq 311$  m. These findings can help to identify patients at risk of hospitalisation for more close supervision.