not reach the LDL-C <1.4 mmol/L and/or decrease by 50% from the initial. The second consisted of 41 people who reached the target LDL-C level.

**Results:** After 24 weeks of therapy in patients of group 1, there was no significant dynamics in all studied parameters. While in the 2nd group, there was a significant decrease in almost all characteristics of vascular rigidity: PWV - from 8.1±1.8 to 7.5±6.7 m/s - by 21.7% (p=0.01); R-PWV - from 13.1(12.5;14.2) to 12.0±0.84 m/s - by 8.1% (p=0.03); L-PWV: from 6.8(12.5;15.1) to 12.2 (11.2;12.9) m/s - by 6.8% (p=0.001). No significant changes were observed in CAVI-1. L-CAVI-1 decreased from 7.8(7.3;8.4) to 7.4±0.9 - by 4.6% (p=0.03).

**Conclusions:** Achievement of the LDL-C target level in patients after STEMI during 24-week therapy with atorvastatin 40-80 mg was accompanied by a significant improvement in the structural and functional properties of arteries according to volume sphygmoscopy.

**THE MAIN FACTORS INFLUENCING PHARMACOTHERAPY IN PATIENTS OVER 60 YEARS OLD WITH ARTERIAL HYPERTENSION**

Irina Avdeeva, Natalia Borisova, Nadezhda Burko, Valentin Oleynikov. Penza State University, Penza, RUSSIA

**Objective:** to assess the significance of the main factors influencing the pharmacotherapy performed in patients over 60 years old with arterial hypertension (AH) 1-2 grade.

**Design and method:** the study included 50 persons over 60 years old with AH 1-2 grade. Office BP on pharmacotherapy was 136.7±13.5 and 81.8±7.7 mmHg, mean age - 71.7±4.9 years. According to the questionnaires, the following factors were assessed: cost of drugs (less and more than 5 euros), frequency of administration, presence of disease symptoms before taking the drug, influence of awareness of the disease on interest in treatment, self-control over the treatment process, quality of medical care

**Results:** the cost of drugs, if it was up to 5 euros, for the majority of patients (64%) had an average significance, while at a cost over 5 euros this factor acquired a high and very high value (50 and 26%, respectively). The frequency of drug intake was of average significance (16%) and higher (high - 22%, very high - 30%). The factors associated with communication with a doctor had a high and very high value for more than 50% of patients: the accuracy of the recommendations was 38 and 30%, the satisfaction from communication with the doctor was 41 and 22%, respectively. The speed of medical care and the doctor’s control were predominantly very low (22 and 24%), low (24 and 32%) and medium (24 and 14%) significance. The presence of symptoms for taking drugs increased the significance of receiving treatment by more than 50% (high significance 18%, very high - 46%). The majority of the respondents assessed the disease awareness and interest in treatment as high (34%) and very high (34%). Self-control over the treatment process in half of the patients was rated high (22%) and very high (28%).

**Conclusions:** along with the high cost of drugs, the effectiveness of treatment in patients over 60 years old with hypertension 1-2 grade was significantly influenced by the frequency of drug intake, the presence of symptoms and awareness of the disease, self-control for most people was more important than the doctor’s control

**DYNAMICS OF ARTERIAL STIFFNESS IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION IN LONG-TERM EFFECTIVE LIPID-LOWERING THERAPY**

Irina Matrosova, Natalia Borisova, Anastasia Babina, Valentin Oleynikov. Penza State University, Penza, RUSSIA

**Objective:** To assess the dynamics of regional arterial stiffness by volume sphygmoscopy in patients with primary myocardial infarction with ST segment elevation (STEMI) and without ST segment elevation (NSTEMI) on the background of long-term effective lipid-lowering therapy.

**Design and method:** a total of 24 people with acute coronary syndrome were included: 18 men (75%) and 6 women (25%). The diagnosis was confirmed by biomarkers of myocardial necrosis, electrocardiography, coronary angiography. STEMI was diagnosed in 91.6% of individuals. The average age was 52.8±9.55 years; weight - 81.1±12.6 kg; height 169.7±8.9 m; BMI - 28.4±4.1 kg/m2. Office pressure indicators: SBP - 116.7±12.23 mm Hg and DBP - 74.94±8.74 mm Hg; heart rate - 68.05±5.16 bpm. On 7-9th day from the disease onset and after 48 weeks, the patients underwent an assessment of regional arterial stiffness using volume sphygmoscopy (VaSera-1000, Fukuda Denshi, Japan). The following indices were assessed: the pulse wave velocity in the arteries of muscular type (B-PWV), in the arteries of elastic type on the right and left (R / L-PWV), cardio-ankle vascular index - CAVI, which characterizes the true arterial stiffness, independent of the blood pressure level and the reflected wave. All patients were prescribed with atorvastatin 80 mg/day during the first 24-96 hours of acute myocardial infarction in addition to standard therapy. The duration of therapy was 48 weeks. If the target LDL-C level of <1.5 mmol/L was not achieved 5-6 weeks after AMI, patients were additionally prescribed with ezetimibe 10 mg daily.

**Results:** Against the background of lipid-lowering therapy, a statistically significant decrease in PWV was observed: R-PWV decreased from 13.2±2.4 to 13.2±1.8 (p=0.04), L-PWV decreased from 13.8±1.8 to 13.0±1.4 (p=0.04). Significant dynamics of the average R/L-PWV indicator was from 14.1±2.0 to 13.0±1.6 (p=0.03). There were no significant changes in CAVI and B-PWV.

**Conclusions:** 48-week therapy with atorvastatin 80 mg in patients with primary myocardial infarction with ST segment elevation and without ST segment elevation leads to an improvement in the structural and functional properties of elastic arteries.

**INTERRELATION OF INDICATORS OF LEFT VENTRICULAR-ARTERIAL COUPLING AND PARAMETERS OF LOCAL ARTERIAL STIFFNESS IN THE POSTINFARCTION PERIOD**

Lyudmila Salyamova, Olga Kvasona, Vera Galimskaya, Angelina Khromova, Nadezhda Burko, Valentin Oleynikov. Penza State University, Penza, RUSSIA

**Objective:** to study the correlations between the parameters of the left ventricular-arterial coupling (LVAC) and the parameters of local arterial stiffness in patients after STEMI 6 months after revascularization.

**Design and method:** 125 patients (mean age 51.2±8.8 years) after STEMI were included in the study. The diagnosis was confirmed by biomarkers of myocardial necrosis, ECG, coronary angiography. Echocardiography was performed at the 7-9th day and 6 months after STEMI (MyLab, Esaote, Italy), followed by calculation of LVAC indices: arterial elastance (Ea), left ventricular elastance (Ees), LVAC index (Ea/Ees). The study of the right and left common carotid arteries (CCA) was carried out on a MyLab ultrasound scanner (Esaote, Italy) using high-frequency RF signal technology. The following parameters were recorded: QIMT - intima-media thickness, DC - lateral distensibility coefficient, stiffness index β, loc Psys - local SBP, locPdia - local DBP, locPWV - local pulse wave velocity, AP - amplification pressure.

**Results:** in the study of the correlation of LVAC indices with the CCA stiffness parameters recorded on 7-9th day from the STEMI, a relationship only between Ees and LocPsys (r = 0.40; p = 0.01), Ees and LocPdia (r = 0.26; p = 0.004). After 6 months of follow-up, a closer relationship between the LVAC parameters and the local CCA stiffness was diagnosed. The Ea indicator correlated with DC (r = 0.23; p = 0.009), PWV (r = 0.21; p = 0.02), LocPsys (r = 0.33; p = 0.0002), LocPdia (r = 0.26; p = 0.004) and AP (r = 0.19; p = 0.03). The Ees indicator was found to be associated with LocPsys (r = 0.38; p = 0.00001), LocPdia (r = 0.27; p = 0.002), AP (r = 0.22; p = 0.01).

**Conclusions:** after 6 months, there was a closer correlation between the LVAC indices and the parameters of local pressure and rigidity. This is probably partly due to the remodeling of the cardiovascular system in the postinfarction period and the inclusion of compensatory-adaptive mechanisms that ensure the contractile function of the heart.

**ADHERENCE TO 48-WEEK THERAPY WITH ATORVASTATIN AT VARIOUS DOSES IN PATIENTS WITH PREVIOUS MYOCARDIAL INFARCTION**

Valentin Oleynikov, Lyudmila Salyamova, Olga Kvasona, Angelina Khromova, Svetlana Fadeeva, Nadezhda Burko. Penza State University, Penza, RUSSIA

**Objective:** To study adherence to treatment with atorvastatin at various doses for 48 weeks in patients with STEMI.

**Design and method:** The study included 117 STEMI patients mean age 52.1±8.4 years in the first 24-96 hours from the disease onset. In accordance with the lipid-lowering therapy, the patients were divided into two groups. The first group included 39 people taking atorvastatin 40 mg/day. The second group consisted of 78 patients who received atorvastatin 80 mg/day. On 7-9th day from the STEMI, after 24 and 48 weeks of follow-up, treatment adherence was assessed using the Morisky-Green questionnaire. In addition, compliance was determined based on the number of dispensed and returned drugs.

**Results:** After 48 weeks of follow-up, pharmacotherapy was continued in the 1st group of 30 people (76.9%), in the 2nd group - 73 (93.6%) patients (p=0.008); 9 patients (23.1%) from group 1 and 5 people (6.4%) from group 2 (p=0.008) independently discontinued treatment. After 48 weeks of follow-up, 17 patients (43.6%) in the 1st group were assigned to the number of compliant patients, and 39 people (50%) in the 2nd subgroup (p=0.54). Ten patients (25.6%) in group 1 and 15 patients (19.2%) in group 2...