Objective.To study vascular age, 5-year risk of cardiovascular complications and atherogenic coefficient in men and women with arterial hypertension.

Materials and methods.We observed medical history of 105 patients, who were admitted to the department of internal medicine of Syrdarya central hospital. The estimation of vascular age and 5-year risk of cardiovascular complications was performed with the ASCORE risk score model. Atherogenic coefficient was calculated with the formula: (conventional unit) (total cholesterol — ​high density lipoproteins)/ high density lipoproteins. Statistical data processing was performed using the STATISTICA 10 software and correlation and regression analysis.

Results. The average age for men was 64.6 ± 9.5 years and 66.9 ± 10.05 years for women. Vascular age, estimated with ASCORE, and biological age were different and tended to increase in both groups (70.2 ± 10.8 and 74.2 ± 9.8, respectively). 2.56 % of men had low risk, 25.64 % had moderate risk, 69.23 % had high risk and 2.56 % — ​very high 5-year risk of cardiovascular complications estimated with ASCORE. 6.06 % of women had low risk, 30.3 % had moderate risk, 60.6 % had high, and 3.03 % had very high risk of cardiovascular complications. Atherogenic coefficient had direct correlation with the 5-yesr risk of cardiovascular complications (r = 7019; p = 0.0000). Vascular age also correlated with the 5-year risk of cardiovascular complications (regression coefficient R2 = 57.6 %; p= 0.0000).

41.1 % of men had normal atherogenic coefficient, 51.3 % had moderate risk of atherosclerosis, and 3 % had high risk of atherosclerosis. 43.9 % of women had normal atherogenic coefficient, 39.9 % and 16.6 % had moderate and high risks of atherosclerosis, respectively.

Conclusion*.* Thus, we established a correlation between vascular age, atherogenic coefficient and 5-year risk of cardiovascular complications in patients with arterial hypertension. Vascular age can be an independent prognostic factor for arterial hypertension and cardiovascular complications development.

Vascular age can be used as a screening method for examining patients with arterial hypertension, as a biomarker for predicting cardiovascular complications.

Key words:arterial hypertension, vascular age, ASCORE risk score, vascular risk assessment, atherogenic coefficient.