The aim of the study was to investigate the influence of the severity of local cardiac depots of adipose tissue on the development of paroxysmal atrial fibrillation (AF) in patients with coronary heart disease (CHD) and arterial hypertension (AH).

**Materials and Methods.** The study included 82 patients (49 men and 33 women) with CHD aged 37–88 years (mean age — 62 [60; 75] years). Paroxysmal form of AF was diagnosed in 27 patients who constituted the main group.

All patients had anthropometric parameters measured: body mass index, waist circumference, hip circumference. Structural and functional state of myocardium was assessed by echocardiography (EchoCG). Statistical data processing was performed using MedCalcR Statistical Software version 20.104 (MedCalc Software Ltd, Ostend, Belgium). The nature of the data distribution was assessed using the Kolmogorov-Smirnov criterion. In case of normal distribution, data were presented as mean (M) and standard deviation SD). Nonparametric indicators were represented as median and interquartile range (Me [Q25; Q75]). The correlation between the two quantitative characteristics was assessed using Spearman correlation analysis (r). ROC analysis was performed to determine the threshold value of the studied attribute. Binary logistic regression method was used to assess the possibility to predict the

risk of AF development. Differences were considered statistically significant at p<0.05.

**Results.** There was a correlation between interatrial septal thickness (IST) and waist circumference (WC) (r = 0.5; p = 0.0003), hip circumference (HC) (r = 0.6; p < 0.0001), and epicardial fat thickness (EF) (r = 0.7; p < 0.0001). ROC analysis showed that IST > 0.7 cm (p<0.001) and EF thickness > 0.6 cm (p < 0.001) were indicative of paroxysmal AF.

Determination of threshold values of IST and EF thickness separately among men and women with the regard to the presence/absence of abdominal obesity (AO) showed that in men without AO, IST thickness > 0.5 cm and EF thickness > 0.7 cm, as well as IST > 0.7 cm in men with AO had a high diagnostic value for determining the probability of AF development.

**Conclusion.** Epicardial adipose tissue thickness > 0.6 cm (p < 0.001) and IST > 0.6 cm (p < 0.001) may serve as markers of AF in patients with CHD, and determination of EF thickness and IST together with WC measurement may serve as prognostic criteria of AF risk in men with CHD (model significance p = 0.0062). Thus, the assessment of IST and EF thickness in patients with CHD can be recommended for determination during EchoCG.