

# GENDER DIFFERENCES IN PATIENTS WITH ATRIAL FIBRILLATION

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**Introduction.** The most common and persistent arrhythmia today is atrial fibrillation (AF). There is conflicting data, as to whether or not gender plays a role in the association of various risk factors and the development of AF. There are many gaps in our knowledge of the gender differences in AF, and many opportunities for future research.

**Aim of the study.** To evaluate clinical and laboratory differences in male and female patients with AF.

**Materials and methods.** The study included 90 patients with persistent and paroxysmal form of non-valvular AF, who were admitted to Grodno State Cardiological Center for treatment from January to December 2024. Group 1 included 44 male patients, while Group 2 included 46 female patients. All patients underwent clinical and laboratory studies. Statistical analysis was performed using the STATISTICA 12.0 software.

**Results and discussion.** Male patients with AF were younger than females (61 [55; 70] vs 68 [63; 75] years,  $p=0.001$ ) and had slightly lower, however insignificantly, body mass index (29 [25; 33] vs 31 [26; 36],  $p>0.05$ ). More than a half of patients in each group had obesity (52% vs 58%,  $p>0.05$ ). Also, patients of both groups were comparable in prevalence of coronary artery disease, stable angina and diabetes mellitus ( $p>0.05$ ). Female patients were more likely to have hypertension (100% vs 79%,  $p=0.02$ ) than male patients, however there were no significant differences in stages of hypertension and heart failure NYHA functional class ( $p>0.05$ ).

In biochemical blood test male patients had higher levels of creatinine (93 [79; 102] vs 79 [68; 90]  $\mu\text{mol/L}$ ,  $p=0.01$ ) and lower eGFR (79 [69; 93] vs 68 [58; 75]  $\text{ml/min/1.73m}^2$ ,  $p=0.001$ ) than females, however their urea levels were comparable (7.9 [4.8; 7.1] vs 5.9 [4.5; 7.3]  $\text{mmol/L}$ ,  $p=0.29$ ). There were no intergroup differences in values of total cholesterol ( $p=0.92$ ), glucose ( $p=0.17$ ) and sodium ( $p=0.14$ ), however potassium levels were lower in females (4.4 [4.1; 4.8] vs 4.7 [4.4; 5.0]  $\text{mEq/L}$ ,  $p=0.004$ ).

**Conclusion.** Female patients with AF were older and more prone to hypertension, while both groups demonstrated high percent of comorbidities, such as coronary artery disease, obesity and diabetes. Male patients had significantly lower levels of renal function parameters; and female patients had a tendency to electrolyte imbalance.