

Dąbrowski E. J., Niwińska M. M., Muszyński P., Kurasz A.
SEX-RELATED DIFFERENCES IN PATIENTS WITH HEART FAILURE
Supervisor ass. prof. Marcin Kożuch
The Department of Invasive Cardiology
Medical University of Białystok

Introduction. According to WHO statistics, CVD are the leading death causes globally. It is well known that heart failure (HF) is a common condition with lots of initiators, such as ischemic causes. However, these are generalised for both gender and there is still a lack of data about sex differences in HF.

Aim: comparison of etiology, prevalence of comorbidities and possible risk factors between males and females suffering from HF.

Materials and methods. The study population consisted of 440 patients (70,91% male) treated for HF and stable coronary artery disease (CAD). Patients were chosen from data collected by the Department of Invasive Cardiology of the Medical University of Białystok. Analysis of clinical data and laboratory tests was performed using Statistica software. P-value $p < 0.05$ was considered as statistically significant.

Results. In our study we noticed that higher mean age was associated with females (71.98 ± 7.58 vs 66.82 ± 8.38 $p = 0.000002$). Past myocardial infarction (MI) was predominantly associated with male gender (61.54% vs 50.78%, $p = 0.038$), while women were characterized by more frequent chronic kidney disease (27.34% vs 13.46% $p = 0.0005$) occurrence. Heart valve defects, such as: tricuspid regurgitation (17.97% vs 5.13% $p = 0.00002$), mitral stenosis (6.25% vs 0.00% $p = 0.000009$), mitral regurgitation (56.25% vs 34.62% $p = 0.00003$), aortic stenosis (19.53% vs 9.29% $p = 0.003$), aortic regurgitation (25.00% vs 16.99% $p = 0.0535$) were mostly related with females. Analysis of ejection fraction (EF) and serum levels of BNP revealed that higher values are associated with females (44.85 ± 11.00 vs 39.84 ± 9.84 $p = 0.0002$; 704.18 ± 745.15 vs 348.28 ± 311.27 $p = 0.038$, respectively).

Conclusions. Due to higher prevalence of MI in men, a special emphasis should be put on prevention of acute coronary states. Particular attention should be paid to effective CAD treatment, especially among women - as results show they are more exposed to chronic ischemia complications, such as heart valve defects and therefore heart failure. Mean EF between 40-49% puts women in the 'grey area' of HF (neither in group of HF with reduced EF, nor in HF with preserved EF) which makes it harder to apply appropriate treatment.