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SURVIVAL OF PATIENTS WITH ATRIAL FIBRILLATION AND HEART FAILURE

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Relevance. Heart failure (HF) remains a leading condition in patients with different cardiovascular (CV) and other diseases, which impact negatively on CV mortality. The coexistence of atrial fibrillation (AF) and HF represents a critical intersection in cardiovascular diseases, markedly increasing patient morbidity and mortality. Recently published results delighted progressive impairment of cardiac pump function as a natural history of AF. The variability in treatment approaches, demographic disparities, and clinical outcomes underscores the importance of a thorough investigation across diverse patient populations with AF and different stages of HF.

Aim: the aim of this research was to evaluate survival outcomes in patients with AF and HF, emphasizing the impact of pharmacological and instrumental interventions, sociodemographic differences, and timing of the diagnosis in different groups of patients.

Materials and methods. The work synthesizes data from large-scale studies and clinical randomized controlled trials around the world in which a broad spectrum of treatment modalities, racial and ethnic groups, and stages of disease progression with the subsequent analysis of survival in AF patients.

Results and their discussion. Mortality rate of AF patients is high independently on medical or endovascular treatment of patients. The majority of patients in these trials were treated with multiple groups of drugs in up titrated doses. An endovascular intervention was contemporarily performed in selected cohorts. To prevent stroke and other thromboembolic complications patients were treated with the direct oral anticoagulants. In the FARAONIC study, patients with HF and AF treated with rivaroxaban as the most-commonly used medication to prevent thromboembolism exhibited a 2-year mortality rate of 11.6%, with a significant reduction in mortality observed in patients adhering to HF pharmacotherapy, as compared to the other drugs (hazard ratio: 0.092; 95% CI: 0.03–0.31). The ARIC study identified higher mortality rates among Black patients with AF (106.0 per 1,000 person-years) compared to White patients (55.9 per 1,000 person-years).² Similarly, the AFFIRM study demonstrated that while Caucasians benefited more from rate control, Hispanic patients showed superior outcomes with rhythm control strategies. The CASTLE-AF trial revealed that catheter ablation in patients with symptomatic AF and reduced left ventricular ejection fraction significantly lowered all-cause mortality and hospitalizations due to HF compared to medical therapy (13.4% vs. 25.0%; HR: 0.53; P = 0.01). In patients with end-stage HF, the CASTLE-HTx trial further demonstrated the superiority of catheter ablation combined with primary end-point in 8% (p<0,001) and death from any cause in 6% (HF 0,29) during 18-month follow up in patients with guideline-directed medical therapy over pharmacologic treatment alone, showing the reducing of mortality, LVAD implantation, and urgent heart transplantation and survival rate.

Conclusion. The survival of patients with HF and AF is influenced by complex and interrelated factors, including race, pharmacologic adherence, and treatment modality. Evidence from multicenter trials supports catheter ablation as a superior intervention in selected populations, particularly in advanced HF with reduced left ventricular pump function. Individualized treatment strategies and equitable representation in research are essential for optimizing long-term outcomes.