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THE EFFECT OF SGLT2 INHIBITOR THERAPY ON THE COURSE OF ATRIAL FIBRILLATION IN PATIENTS WITH CHRONIC KIDNEY DISEASE

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Abstract.

Chronic kidney disease (CKD) is one of the leading risk factors for the development of cardiovascular complications, including atrial fibrillation (AF). In patients with CKD, AF occurs significantly more frequently and is associated with an increased risk of stroke, progression of heart failure, and mortality. In recent years, sodium–glucose cotransporter-2 (SGLT2) inhibitors have attracted considerable attention due to their pronounced nephroprotective and cardioprotective effects that extend beyond their glucose-lowering properties. However, the impact of this drug class on the course of AF in patients with CKD remains insufficiently studied.

Keywords

Chronic kidney disease, atrial fibrillation, SGLT2 inhibitors, heart failure, cardioprotective therapy, nephroprotection.

Objective.

To evaluate the effect of SGLT2 inhibitor therapy on the clinical course of atrial fibrillation in patients with chronic kidney disease.

Materials and Methods.

The study included 120 patients with CKD stages I–III and diagnosed atrial fibrillation. Patients were divided into two groups: the main group (n=60) received standard therapy in combination with SGLT2 inhibitors, while the control group (n=60) received standard therapy alone. The follow-up period was 12 months. The

frequency and duration of AF paroxysms, heart rate, echocardiographic parameters, and the rate of hospitalizations related to cardiovascular complications were assessed.

Results.

After 12 months of follow-up, the main group demonstrated a significant reduction in the frequency of AF episodes by 32% ($p<0.05$) and a decrease in their duration by 28% ($p<0.05$). Improved heart rate control and a 25% reduction in hospitalizations due to heart failure were also observed ($p<0.05$). No significant positive changes were identified in the control group.

Conclusions.

The use of SGLT2 inhibitors in patients with chronic kidney disease has a beneficial effect on the course of atrial fibrillation, reducing the frequency and severity of arrhythmic episodes. The obtained results support the feasibility of including this class of drugs in the comprehensive treatment of patients with CKD and AF.

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