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## **WAYS TO OPTIMIZE THE TREATMENT OF BILIARY SYSTEM DISORDERS IN PATIENTS WITH TYPE 2 DIABETES**

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The aim is to evaluate the effectiveness of complex therapy involving ursodeoxycholic acid and  $\alpha$ -lipoic acid in patients with a combination of type 2 diabetes mellitus (DM) and chronic noncalculous cholecystitis (CNC) based on the study of the dynamics of cholecystosonography parameters (in examination and the dynamic variants).

Materials and methods. The study involved 62 patients with a combination of type 2 diabetes mellitus and CNC, who were treated at the Municipal noncommercial establishment of Kharkiv Regional Council "Regional Clinical Hospital". The patients were representative by age and gender. All patients on admission to the hospital underwent a thorough examination using conventional clinical, laboratory and instrumental studies. In order to study the changes in the motor-evacuatory and cholesecretory function of the biliary system, a two-stage ultrasound examination was performed - cholecystosonography. The complex treatment included therapeutic nutrition, antispasmodic and antibacterial therapy, UDCA at a dose of 10 mg / kg for 4 weeks, as well as  $\alpha$ -lipoic acid 600 IU drop infusion for 10 days, followed by its oral administration for 3-4 weeks. In order to assess the effectiveness of the therapy, the indicators of examination and dynamic cholecystosonography after 1 month in the dynamics of treatment were evaluated.

Research results. The study of the dynamics of the examination cholecystosonography in patients with a combination of type 2 diabetes and CNC identified significant changes on the background of treatment. There was a twofold decrease in the percentage of patients with a cylindrical shape of the gallbladder (GB), an increase in the percentage of patients with an oval shape of the gallbladder and the appearance of a cohort of patients with a pear-shaped form of GB (17.7%), which is almost one-fifth of all patients with type 2 diabetes and CNC involved in

the study. In addition, from 85% to 9.7% decreased the number of patients with deformity of the contour of the GB, as well as with the presence of the septal membrane (from 88.7% to 19.4%). There is a significant decrease of patients with thickened GB walls, up to 22.6%, whereas at the beginning of treatment similar changes were found in 100% of patients with type 2 diabetes and CNC. There was a positive dynamics of changes in the content of GB: significantly decreased the percentage of patients with inhomogeneous GB content, cases of sludge phenomenon disappeared together with an increase in the percentage of patients with homogeneous GB content, which was found in almost  $\frac{3}{4}$  patients with a combination of type 2 diabetes and CNC on the background of comprehensive treatment. The elimination of the positive ultrasound Murphy symptom was noted in all patients with comorbidity of type 2 diabetes and CNC after treatment. Changes in the parameters of dynamic cholecystosonography in patients with a combination of type 2 diabetes mellitus and CNC under the influence of therapy were evaluated. Under the influence of complex therapy, the latency period was significantly reduced and defecation rates increased every 15, 30, 45 and 60 minutes ( $p < 0.05$ ). In addition, there was a decrease in the initial and final volumes of GB on the background of the treatment in patients with a combination of type 2 diabetes and CNC ( $p < 0.05$ ). The index of GB contraction under the influence of treatment in patients with comorbidity of type 2 diabetes mellitus and CNC increased significantly ( $p < 0.05$ ).

Conclusions. Involvement in the complex therapy of UDCA and  $\alpha$ -lipoic acid was accompanied by positive effects due to the improvement of the contractile capacity of GB, which improved the motor-evacuatory and cholesecretory functions of GB of patients with type 2 diabetes and CNC.