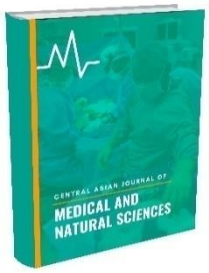
CENTRAL ASIAN JOURNAL OF MEDICAL AND NATURAL SCIENCES



Volume: 04 Issue: 02 | Mar-Apr 2023 ISSN: 2660-4159

http://cajmns.centralasianstudies.org

Fatty Hepatosis in Diabetes

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Received 11th Feb 2023,
Accepted 10th Mar 2023,
Online 18th Apr 2023

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Abstract: Fatty hepatosis in diabetes affects the clinical course of the disease, causing various liver disorders, including absorption and antitoxic. Sufficient and effective therapy of fatty hepatosis can be considered as one of the tasks of complex treatment of patients with diabetes. In this context, the results of our research summarized in this article can be useful.

Keywords: diabetes, fatty hepatosis, therapy, hepatocyte, spleen, liver, insulin.

Relevance of the problem: Today, the number of patients with diabetes in the world is increasing day by day. The presence of secondary, i.e., fatty hepatosis in patients with diabetes causes certain problems in the treatment of this disease. The passage of fatty hepatosis in diabetes is the relevance of our topic.

Purpose of research: Our purpose of research is to study the course of fatty hepatosis in diabetes.

Materials and methods: We examined 109 patients with non-insulin-dependent diabetes mellitus (type II) aged 26-55 years in the compensation phase lasting more than 3 years. Patients with acute viral hepatitis and alcohol abuse were not included in the survey. In addition to the increase in the liver and the violation of the integral indicators of absorption and antitoxic functions of hepatocytes, in the diagnosis of fatty hepatosis, they are based on the data of ultrasound examination of the liver, according to these materials. biopsy-sonographic comparisons are closely related to the degree of fatty hepatosis. This applies not only to the criteria of irregularities in the contours of the liver, homogeneous amplification of echo signals from its parenchyma, but also to the highest values of the amplitude of the ultrasound histotopography of the liver. Absorption capacity of hepatocytes was assessed by ueviridin test. The dye was injected at a dose of 0.5 mg per 1 kg of body weight, after 3 and 7 minutes the concentration of ueviridin in the blood taken from the cubital vein of the other hand was determined spectrophotometrically and the half-life of absorption. staining by hepatocytes was calculated. Now the test with antipyrine is recognized as optimally adequate in studying the oxidative-antitoxic function of hepatocytes. We used the option of oral administration of 10 mg/kg of antipyrine, and analyzed its concentration. Spectrophotometric determination of blood and calculation of antipyrine clearance after 4 and 24 hours. For therapeutic purposes, we used 2 preparations from the

plant Sylibium marianum, which are used in clinical practice for hepatoprotective purposes - carsil and silibor. The first of them contains 35 mg of purified silymarin in 1 tablet and the composition is similar to legion. Silibor contains a complex of different flavonoids from Sylibium marianum. The literature on the clinical use of both hepatoprotectors of this plant and the experimental basis for such use is extensive. The diabetic patients we examined received 2 tablets of Karsil 3 times a day or 2 tablets of silibor 3 times a day - the usual recommended doses of the drug. In addition, we studied the same criteria of the liver condition in patients with diabetes, the effect of the drug Liv-52, which is prepared from juices and decoctions of a number of plants (India) and is used as a hepatoprotector in clinical practice. Patients were prescribed 2 tablets 3 times a day. We conducted another series using inductothermy for the purpose of hepatoprotection in the area of the spleen. Preconditions Physiological hepatolienal correlation and a lot of information about the humoral influence of the spleen on metabolic processes in the liver, positive results of the use of splenic diathermy in toxic liver damage. Inductothermy in the area of the spleen was carried out every day for 5 days for 20 minutes using the IKV-4 device in a dose according to the third stage (low thermal dose). In addition to the tested interventions (drugs or splenic inductothermy), patients received the same maintenance dose of an oral antidiabetic drug as before the start of the studied hepatoprotective course. There were no adverse effects on drugs or splenic inductothermy in patients. In addition to the 18 healthy subjects with the same parameters, another control group in our studies consisted of 12 patients with diabetes, who received 10 days of oral antidiabetic drugs other than maintenance therapy. received no treatment. preliminary and repeated analysis of the studied parameters of liver condition).

RESULTS AND DISCUSSION The table shows that 4 1-3 days after the end of the treatment course 4.4±0.3 28.8±1.5 R <0.001 <0.001 with diabetes who received Liv-52 for 10 days patients (n=17): initial values 5.5±0.4 24.0±1.6 1-3 days after the end of the treatment course 5.1±0.5 26.2±1 ,5 R >0.1 >0.1 Diabetic patients treated with splenic inductothermy for 5 days (n=39): initial values 5.8±0.3 23.2±1.1 1 -3 days after the end of the treatment course 4.1±0.3 28.1±1.2 P<0.01<0.01 absorption and antitoxic functions of hepatocytes. The degree of hepatoprotective effect of both preparations of Sylibium marianum - foreign carcil and domestic silybor turned out to be close. In one of the works 6 1-3 days after the end of the treatment course 5.1 ± 0.5 26.2 ± 1.5 P > 0.1 > 0.1 Diabetic patients who received 5-day splenic inductothermy (n = 39): initial values 5.8 ± 0.3 23.2 ± 1.1 1-3 days after the end of the treatment course 4.1 ± 0.3 28.1 ± 1.2 R <0 ,01 <0,01 values of absorption and antitoxic functions of hepatocytes. The degree of hepatoprotective effect of both preparations of Sylibium marianum - foreign carcil and domestic silybor turned out to be close. In one of the works 6 1-3 days after the end of the treatment course 5.1 ± 0.5 26.2 ± 1.5 P > 0.1 > 0.1 Diabetic patients who received 5-day splenic inductothermy (n = 39): initial values 5.8 ± 0.3 23.2 ± 1.1 1-3 days after the end of the treatment course 4.1 ± 0.3 28.1 ± 1.2 R <0 ,01 <0,01 values of absorption and antitoxic functions of hepatocytes. The degree of hepatoprotective effect of both preparations of Sylibium marianum - foreign carcil and domestic silybor turned out to be close. In one of the works, the degree of hepatoprotective effect of both preparations of Sylibium marianum - foreign carcil and local silybor was found to be close. In one of the works, the degree of hepatoprotective effect of both preparations of Sylibium marianum - foreign carcil and local silybor was found to be close. In one of the works, silibor did not affect the activity of liver microsomal monooxidases, but in our observations, the results of the antipyrine test reflecting this activity showed a positive effect of silibor. We have reason to believe that the conclusions of the cases where the effectiveness of silibor and silymarin (legalon, karsil) are the same are reasonable. As for Liv-52, according to the criteria of the tests with ueviridin and antipyrine, it did not have a statistically significant effect on the absorption and oxidative-antitoxic functions of the liver in patients with diabetes. During the study, a positive effect was shown on the

studied parameters of the functional state of the liver in patients with diabetes who underwent a 5-day course of splenic inductothermy. Technically simple, without side effects and available in any medical facility, this method of hepatoprotection in fatty liver in patients with diabetes also deserves a positive evaluation. This is confirmed by the results of our dynamic studies conducted in 11 of the total number of diabetic patients who received spleen induction. 2 weeks after the completion of a 5-day course of inductothermy of the spleen, the T 1/2 value of ueviridin was 4.3±0.4 min, antipyrine clearance was 30.1±1.6 ml/min. Comparing the data presented in the table, we can note that there are no statistically significant differences ($p>0.1$) with the values of these indicators immediately after the end of the course of inductothermy of the spleen. Thus, the beneficial effect of a 5-day course of this effect lasts at least 2 weeks after its completion. We tried to determine to what extent the indicators of the amplitude peak of the ultrasound histogram of the liver reflect not only the differences in the state of the liver in diabetics and healthy people, but also the effect of some hepatoprotective factors. It turned out that when using karsil or silibor for 10 days, or inductothermy of the spleen for 5 days, the improvement of the functional parameters of hepatocytes is accompanied by regular changes in the peak of the ultrasound amplitude histogram of the liver. In healthy people, this indicator was 27.8±0.8 units, in diabetic patients (without hepatoprotective effect) in the control group, it was initially 17.5±1.5, after 10 days it was 17.9 It was ±1.2 units. ($p>0.1$), 17.6 ± 1.4 and 22.1 ± 1.3 units in those receiving Carsil during these periods. ($p<0.01$), 18.0±1.4 and 23.1±1.2 units in those treated with silibor. ($p<0.05$), 17.6±1.3 units initially, 22.9±1.4 units after completing the course. ($p<0.01$). Therefore, the dynamics of the peak of the ultrasound amplitude histogram of the liver can also be a useful guide in the investigation of hepatoprotective effects in diabetic patients with fatty liver.

Conclusion. In summary 1. A 10-day course of therapy with Karsil (silymarin, legalon) or silybor in patients with hepatic non-insulin-dependent diabetes mellitus improves absorption (according to the ueviridin test) and antioxidant-antitoxic (with antipyrine) according to the conducted test) improved.) functions of hepatocytes. With the same 10-day course, the drug Liv-52 did not affect the studied indicators of the state of the liver. 2. Inductothermy in the area of the spleen (one 20-minute session for 5 days) improves absorption and antitoxic functions of the liver in patients with diabetes. The positive effect of inductothermy of the spleen lasted at least 2 weeks after the end of the inductotherapy course. 3. The indicators of the peak of the ultrasound amplitude histogram of the liver reflect the dynamics of the state of the liver during treatment with Karsil, Silibor and inductothermy of the spleen.

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