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Research Article

ASSESSMENT OF THE INFLUENCE OF COMPLEX TREATMENTS ON KIDNEY FUNCTIONAL RESERVE IN PATIENTS WITH LIVER CIRRHOSIS DEVELOPED DUE TO HEPATITIS V AND C.

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ABSTRACT

Cirrhosis of the liver is manifested by necrosis of hepatocytes, disruption of its normal architecture due to diffuse growth of connective tissue and the formation of regeneration nodules, as well as developing fibrosis. The article presents a modern approach to the treatment of hepatorenal syndrome, one of the severe complications of the disease. The effect of eplerenone, L-ornithine L-aspartate and glutathione drugs on the functional reserve of kidneys was evaluated on the basis of complex treatment.

KEYWORDS

Hepatitis B, hepatitis C, liver cirrhosis, hepatorenal syndrome, renal functional reserve, L-ornithine L-aspartate, glutathione, eplerenone.

INTRODUCTION

Cirrhosis of the liver is a diffuse disease of chronic exacerbation, manifested by necrosis of hepatocytes, disruption of its normal architecture due to the growth of connective tissue and the formation of regeneration

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nodules, as well as progressive fibrosis. As a result, developing chronic liver failure, signs of portal hypertension, severe complications leading to death are observed.

The disease is one of the six leading causes of death for patients aged 35 to 60 years in economically developed countries. It is recorded in 14-30 people out of every 100,000 inhabitants. Every year, about 1.4 million people in the world die from cirrhosis of the liver and its complications. Scientific observations confirm that liver cirrhosis is more common in men [1, 6, 7, 9].

Cirrhosis of the liver is a polyetiological disease, in most cases it is caused by hepatitis B, C, D viruses (the most common type C), alcohol abuse. Also, alimentary - allergic, toxic and other factors cause the disease [1].

Among the numerous complications of liver cirrhosis, one of the least studied is hepatorenal syndrome. Approximately 15% of affected patients develop hepatorenal syndrome within 6 months of first hospitalization for ascites, and 40% within 5 years [11, 8, 5]. Full-fledged scientific observations dedicated to it have not been conducted in Uzbekistan.

30 years ago, creatinine levels of 150 mmol/l and higher were accepted as criteria for kidney failure in hepatorenal syndrome. This corresponds to glomerular filtration rate (FFT) of 40 ml per minute and below [4, 10]. It is known that GFR can be determined using special formulas based on endogenous creatinine levels in blood serum.

Currently, renal functional reserve (RBF) concentration and tests for its assessment have been created based on GFR. FSK is understood as its ability to increase GFR from the basal, i.e., primary state to the maximum level. To achieve it, all nephrons, not only deep, but also superficial, participate in the process [2].

In most of the literature, in the data presented, FSK was studied in patients with diabetes in most cases. However, there is almost no information on the use of this test in a number of other diseases, including hepatorenal syndrome. However, the study of FSK in hepatorenal syndrome developed on the basis of liver cirrhosis makes it possible to diagnose nephropathy early.

The purpose of the study: to evaluate the functional reserve of the kidneys before and after the complex treatment with the addition of eplerenone, L-ornithine L-aspartate and glutathione in patients with advanced liver cirrhosis due to chronic hepatitis B and C.

Research material and methods: As a source of research, 124 patients with clinical signs of type II hepatorenal syndrome treated at the clinic of Andijan State Medical Institute were observed. Patients with hepatorenal syndrome and included in the study were divided into two groups. The first group consisted of 60 patients with liver cirrhosis caused by viral hepatitis

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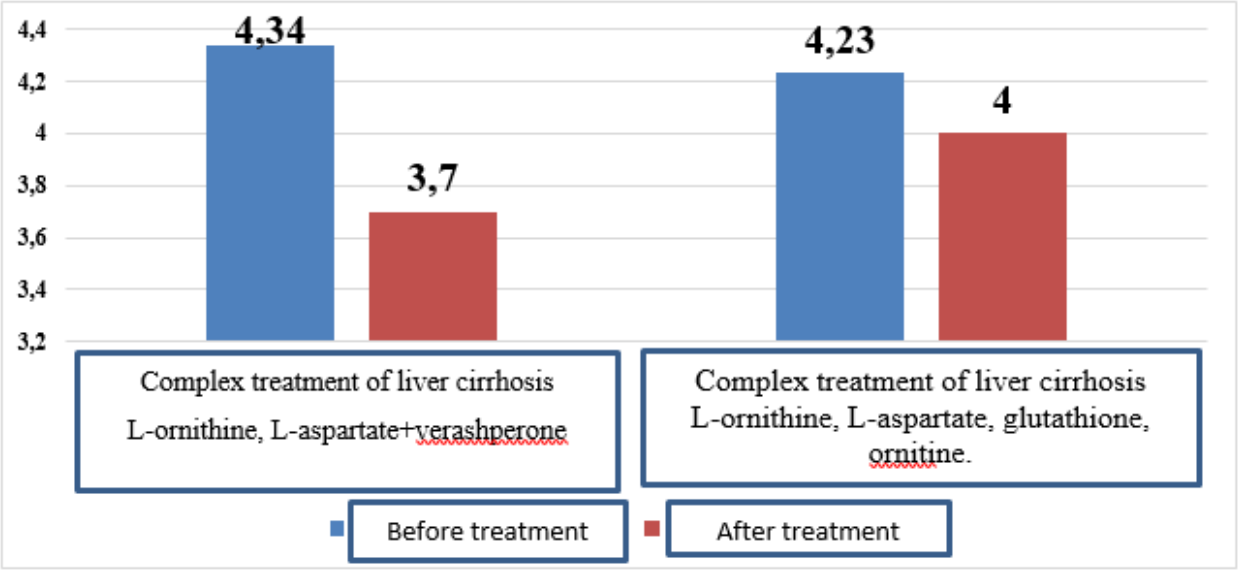
V, 28 men (46.7%) and 32 women (53.3%), their average age was 46.44±1.38. The second group had liver cirrhosis caused by chronic hepatitis C. It consisted of 64 patients. 3 patients died of esophageal variceal bleeding and 1 of hepatocarcinoma and were not included in the follow-up group. Of the remaining 60 patients, 25 were men (41.6%) and 35 were women (58.4%), the average age was 48.82±1.6.

Both groups of patients were divided into two subgroups of 30 patients in order to evaluate the effectiveness of complex treatment procedures with different contents. The first subgroups were prescribed spironolactone (veroshpiron) + L-ornithine L-aspartate on the basis of the complex treatment of liver cirrhosis, and eplerenone + L-ornithine L-aspartate + glutathione drugs were prescribed to the second subgroups on the basis of the complex treatment of liver cirrhosis. Also, taking into account indications and contraindications for the second group of patients and their

1 -table

Changes in renal functional reserve (%) before and after complex treatment of patients with advanced liver cirrhosis due to chronic hepatitis B.



In this figure, we can see that the FSK values in the patients were significantly reduced regardless of the treatment procedures performed. In the first group of patients, FSK decreased from 4.34 ± 0.13 % to 3.7 ± 0.2 % before and after treatments, respectively. In the second group, it was 4.23±0.3% and 4.0±0.2% ($p<0.05$). The fact that FSK did not appear in patients can be explained by the fact that the hepatitis B virus has an

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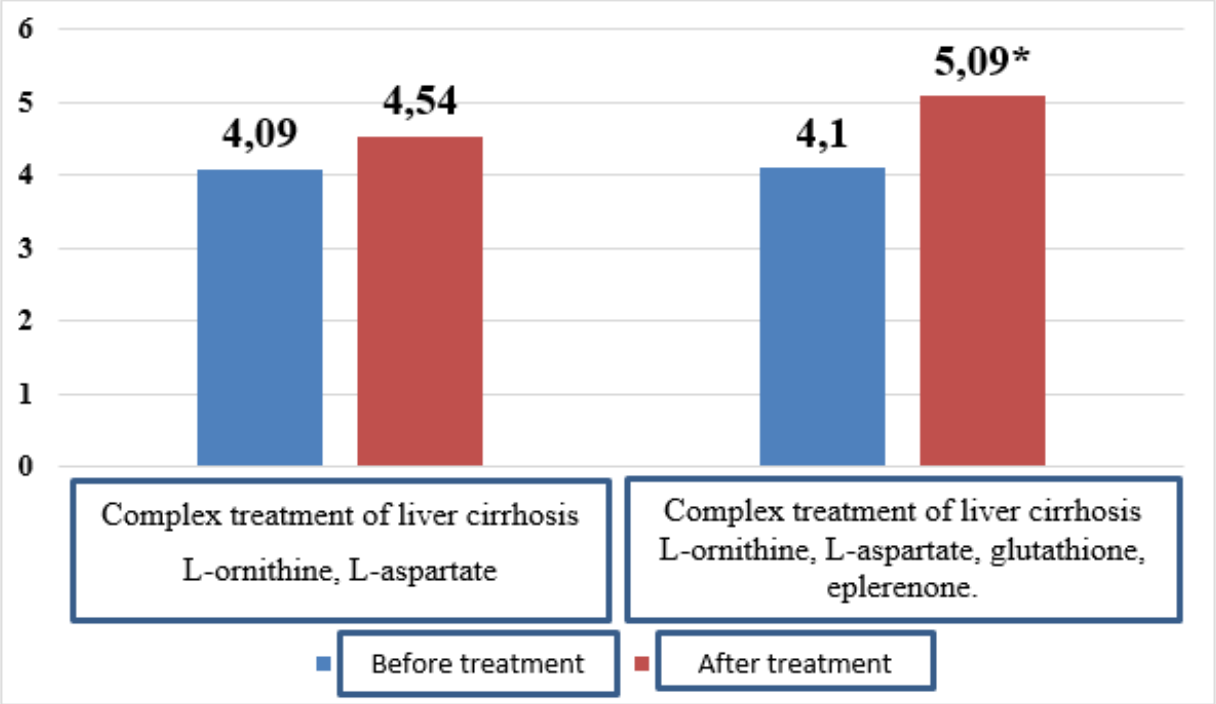
aggressive effect on the liver and kidneys, causing irreversible changes in them.

Positive changes were noted in both groups after treatment with various components in patients with cirrhosis of the liver due to chronic hepatitis C (Fig. 2). In the first group of patients, the indicators before and after treatments increased from 4.09 ± 0.15% to 4.54 ± 0.13%, but they did not develop FSK. In the second group of patients, this indicator was 4.1 ± 0.2% and 5.09 ± 0.14%, respectively, before and after treatment, and high reliable changes were noted (p<0.001).2-table

Changes in renal functional reserve before and after complex treatment of patients with advanced liver cirrhosis due to chronic hepatitis C.



Note: *-r<0.05 - the difference between the indicators before and after treatment.

CONCLUSION

Based on our investigations, we can come to the following conclusion: before the treatments, the indicators of the functional reserve of the kidneys, which were determined with the help of creatinine in the blood by giving a load of 0.45% sodium chloride solution, were low in both groups of patients, indicating the absence of reserve. The positive changes observed in the FSK after the treatment in the second group of patients after the treatment procedures can be attributed to the effective effect of glutathione and

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eplerenone against fibrosis. Also, in liver cirrhosis developed on the basis of chronic hepatitis C, compared to those developed on the basis of hepatitis B, the reliable reduction of fibrosis processes is related to the prescription of antiviral drugs in the complex treatment. Determination of BFZ indicators in the studied groups makes it possible to detect nephropathy in cirrhosis of the liver at an early stage.

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