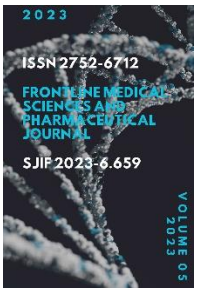
FRONTLINE MEDICAL SCIENCES AND PHARMACEUTICAL JOURNAL
(ISSN – 2752-6712)
VOLUME 03 ISSUE 12 Pages: 22-28
SJIF IMPACT FACTOR (2021: 5.14) (2022: 5.605) (2023: 6.659)
OCLC – 1272874727
Publisher: Frontline Journals




Journal Website: https://frontlinejournals.org/journals/index.php/fmspj



Research Article

# MODERN LIVER PROTECTION IN CHRONIC LIVER DISEASES OF VIRAL ETIOLOGY

**Submission Date:** December 09, 2023, **Accepted Date:** December 14, 2023,
**Published Date:** December 19, 2023
**Crossref doi:** https://doi.org/10.37547/medical-fmspj-03-12-04

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## ABSTRACT

This paper presents the results of a study on the use of the drug Neomarin (restored glutathione) in 40 patients with chronic liver disease (CLD). The study showed the positive effect of Neomarinin on patients with CKD as part of the complex treatment of these diseases. Therapy with Neomarin contributed to the regression of clinical manifestations and normalization of biochemical blood parameters in the vast majority of patients. The use of Neomarin was also noted to be highly safe, which is confirmed by the small number of side effects.

The data obtained allow us to recommend the widespread use of Neomarin in patients with chronic liver diseases of various etiologies.

## KEYWORDS

Hepatitis, liver cirrhosis, viral hepatitis, chronic liver diseases, glutadione, neomarin , biochemical parameters.

## INTRODUCTION

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It is known that liver diseases occupy a significant place among the causes of disability and mortality throughout the world. Moreover, there is a tendency towards an increase in the overall incidence among the population, in particular, acute viral hepatitis, which affects at least one million people around the world every year. The number of patients with chronic liver damage, which is common mainly in people of working age, is increasing [10.4].

Today in the world there are more than 2 billion people with various hepatobiliary pathologies. The overwhelming number of them are patients with viral hepatitis B (HBV) - about 300-350 million people, and hepatitis C (HCV) - about 170 million [1]. Uzbekistan is no exception, where over the past 10 years the prevalence of chronic hepatitis (CH) and liver cirrhosis (LC) has increased. A sharp increase in the number of CHD was facilitated by the increase in the incidence of acute viral hepatitis, alcohol abuse, as well as a significant proportion of patients suffering from obesity and diabetes mellitus, which are a common cause of the development of non-alcoholic fatty liver disease [2].

The significance of CHD is determined not only by its prevalence but also by its ability to progress to LC and hepatocellular carcinoma (HCC), potentially life-limiting conditions.

## THE MAIN RESULTS AND FINDINGS

The need for drug correction of impaired functions of the organs of the hepatobiliary system is currently felt most acutely. Exposure to unfavourable environmental factors, stressful situations, and the use of certain medications inevitably lead to disruption of the functional activity of the liver. Currently, toxic liver damage accounts for 2-3% of the total number of diseases of the hepatobiliary system [8,3]. Given the diverse impact of CHD on the lives and health of patients, health-related quality of life (HRQOL) should be considered as an important element in assessing the effectiveness of treatment in this category of patients.

In this regard, significant interest of researchers in the use of various means that can prevent and correct pathological changes in the hepatobiliary system is justified. The group of hepatoprotectors is very heterogeneous and includes substances of various chemical groups with multidirectional effects on metabolic processes. In addition, despite many years of clinical experience and a large number of scientific studies, the boundaries

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of their application have not yet been delineated, and no means have been found that can comprehensively influence several links in the pathogenesis of the disease [6,7].

All this dictates the need to search for new methods of pathogenetic therapy for CHD. Oh the se days from latest treatment options for CHD are usagedrug neomarine (reconstituted glutathione), which determines stabilization detoxification functions ,supports activity of antioxidant systems, improves T cellfunction , neutralizes free radicals , reduces the synthesis of cytokines (leukotrein , thromboxane A2).

Purpose of the work: to study the effectiveness of the drug Neomarin (“ MULINSEN ”, China) in the treatment of chronic liver diseases of viral etiology: chronic HCV (CHC) and chronic HBV (CHBV), liver cirrhosis as a result of chronic viral hepatitis.

## MATERIALS AND METHODS

Under observation were 40 patients with CHD, most of whom were patients with chronic HBV and HCV infections who were treated at the TMA Multidisciplinary Clinic in the Department of Hepatobiliary Pathology. Among the examined there were 7 (17.5%) patients with chronic hepatitis C, 12 (30%) - with chronic hepatitis B, 8 (20%) - with liver cirrhosis as a result of chronic hepatitis C in the stage of compensation and subcompensation, 5 (12.5%) - with CP as a result of CHB, 6 (15%) – with chronic hepatitis of unspecified etiology and 2 (5%) – with alcoholic CP. 12 (30%) patients had ascites. The duration of the disease ranged from 6 months to 7 years. The diagnosis was verified based on clinical history, general clinical and clinical laboratory studies, including bilirubin level, aspartate aminotransferase and alanine aminotransferase activity, alkaline phosphatase, and thymol test. All patients underwent ultrasound examination of the abdominal organs and other generally accepted instrumental methods, measurement of heart rate, blood pressure, liver and spleen sizes, determination of the severity of pain, asthenic-vegetative and dyspeptic syndromes, alkaline phosphatase, γ-GTP, prothrombin index (PTI), cholesterol, urea, complete blood count (CBC) and platelets.

The clinical picture in the examined patients was dominated by heaviness and periodic aching, dull pain in the right hypochondrium, fatigue, weakness, decreased performance, sleep

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disturbance, headache, mood lability, loss of appetite, belching, poor tolerance of fatty and fried foods, bitterness in the mouth in the morning, periodically - nausea. Thus, 25 (6 2.5%) patients had dyspeptic and abdominal pain syndromes; 21 (52.5%) patients had astheno-vegetative syndrome, which manifested itself as psycho-emotional instability, insomnia, headache, and cardialgia. 12 (30%) of the examined patients had hemorrhagic syndrome in the form of periodic nosebleeds. 9 (22.5%) patients had cholestatic syndrome, manifested by jaundice of the soft palate, skin and mucous membranes, scratching, as well as palmar erythema, "crimson" tongue and spider veins, increased concentration.

The patients were divided into 2 groups of 20 people: 1st – main group and 2nd – comparison group. All patients received standard basic therapy: Patients in both groups received basic therapy, which included detoxification, diuretic, choleretic, hemostabilizing therapy, as well as protein drugs, enterosorbents, enzymes, vitamin E, and lactulose preparations. In addition, patients in the main group received, in combination with traditional therapy, a course of treatment with Neomarin600 mg 2 times a day IV slowly for 14 days. The effectiveness of treatment was assessed by the dynamics of clinical symptoms and laboratory parameters by the end of the tenth day of treatment with Neomarin. Statistical data processing was carried out using MS Excel. To assess the reliability of the results, Student's t-test was used. Changes were considered significant at $P < 0.05$.

Research results and discussion. Analysis of the received data

showed that during treatment with Neomarinin patients of the 1st group, already on the 10th day, abdominal pain syndrome decreased in 11 (50%), dyspeptic pain in 12 (52.2%), asthenovegetative syndrome in 9 (45%), cases, hemorrhagic – in 3 (42.9%) patients.

14 days after the start of therapy, the functional state of the liver improved even more. Clinically, there was a significant improvement in the general condition: the patients had decreased weakness, improved sleep, restored appetite, heaviness in the right hypochondrium, nausea and bitterness in the mouth disappeared. By the end of the course of step-by-step therapy, the clinical condition of the majority of patients returned to normal - dyspeptic symptoms and

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pain in the right hypochondrium were no longer bothersome, and their diet was significantly expanded.

It should be noted that a biochemical study revealed normalization of functional liver parameters (bilirubin, alkaline phosphatase, ALT, AST, thymol test) in the overwhelming number of patients receiving Neomarin(23 (88%)) at the end of the 14-day course of treatment, then as in patients in the control group for this period of time, these indicators remained above normal values (Table 1) .

Tolerability as infusion therapy with Neomarinwas good in most patients. Side effects were observed in 2 (8%) patients receiving Neomarin, in the form of skin rashes, but their severity did not require discontinuation of drug treatment.

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**Table 1**

**Dynamics of changes in biochemical parameters in examined patients with CHD treated with Neomarin**

| Index | Groups | Before treatment | 14th day of treatment |
|---|---|---|---|
| Bilirubin, mmol/l | 1st group | 30.5 ± 1.8 | 21.6 ± 1.9* |
| | 2nd group | 29.8 ± 1.5 | 26.1 ± 1.8* |
| Alkaline phosphatase, me /l | 1st group | 145.2 ± 5.1 | 126.5 ± 5.2* |
| | 2nd group | 144.8 ± 4.8 | 136.4 ± 5.0* |
| ALT, mkkat /l | 1st group | 1.32 ± 0.05 | 0.98 ± 0.04* |
| | 2nd group | 1.31 ± 0.08 | 1.19 ± 0.08* |
| AST, µkat /l | 1st group | 1.24 ± 0.06 | 0.91 ± 0.07* |
| | 2nd group | 1.25 ± 0.07 | 1.16 ± 0.09* |

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| | | | |
|---|---|---|---|
| Thymol test, units. | 1st group | 9.1 ± 0.5 | 4.3 ± 0.6** |
| | 2nd group | 9.2 ± 0.6 | 6.9 ± 0.5* |

**Note: * – reliability of indicators in relation to the original data P <0.05 ; ** – reliability of indicators in relation to previous data P <0.01; *** – reliability of indicators in relation to previous data P <0.001.**

## CONCLUSIONS

1. The study showed the positive effect of Neomarin( reconstitutedglutathione) in patients with chronic liver diseases as part of the complex treatment of these diseases.
2. Therapy with Neomarin contributed to regression of clinical manifestations and normalization of biochemical blood parameters in the vast majority of patients.
3. Neomarin has been noted to be highly safe, which is confirmed by the small number of side effects.
4. The data obtained allow us to recommend the widespread use of Neomarin in patients with chronic liver diseases of various etiologies.

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