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EFFICIENCY OF ETIOTROPIC TREATMENT IN CHRONIC VIRAL HEPATITIS

Abdulloev Muxriddin Ziyodulloevich
Buxoro davlat tibbiyot instituti Yuqumli kasalliklar,
bolalar yuqumli kasalliklari va epidemiologiya kafedrasi.

ABSTRACT

This article aims to evaluate the efficiency of etiotropic treatment in chronic viral hepatitis. The study employs a systematic review and meta-analysis of published studies on the topic, focusing on the effectiveness of different etiotropic agents and their impact on patient outcomes. The results suggest that etiotropic treatment can significantly improve the clinical outcomes of patients with chronic viral hepatitis, particularly in terms of reducing viral load and liver inflammation. However, the effectiveness of etiotropic agents may vary depending on the type of virus and the stage of the disease. The study concludes by highlighting the importance of early diagnosis and timely intervention in managing chronic viral hepatitis.

Keywords: etiotropic treatment, chronic viral hepatitis, systematic review, meta-analysis, viral load, liver inflammation, early diagnosis, timely intervention.

АННОТАЦИЯ

Целью данной статьи является оценка эффективности этиотропного лечения хронического вирусного гепатита. В исследовании используется систематический обзор и мета-анализ опубликованных исследований по этой теме, в которых основное внимание уделяется эффективности различных этиотропных средств и их влиянию на исходы у пациентов. Полученные результаты свидетельствуют о том, что этиотропное лечение может значительно улучшить клинические исходы пациентов с хроническим вирусным гепатитом, особенно с точки зрения снижения вирусной нагрузки и воспаления печени. Однако эффективность этиотропных средств может варьироваться в зависимости от типа вируса и стадии заболевания. В заключение исследования подчеркивается важность ранней диагностики и своевременного вмешательства в лечении хронического вирусного гепатита.

Ключевые слова: этиотропное лечение, хронический вирусный гепатит, систематический обзор, мета-анализ, вирусная нагрузка, воспаление печени, ранняя диагностика, своевременное вмешательство.

INTRODUCTION

Chronic viral hepatitis is a major public health concern, affecting millions of people worldwide. The condition is caused by viral infections, such as hepatitis B virus (HBV) and hepatitis C virus (HCV), which can lead to progressive liver damage and, in some cases, liver failure and hepatocellular carcinoma. While antiviral medications are available to treat chronic viral hepatitis, the effectiveness of these drugs can vary depending on the type of virus and the stage of the disease. Etiotropic treatment, which targets the underlying cause of the disease, has been proposed as an alternative or complementary approach to managing chronic viral hepatitis.

This study aims to evaluate the efficiency of etiotropic treatment in chronic viral hepatitis using a systematic review and meta-analysis of published studies.

Chronic viral hepatitis refers to a long-term infection of the liver caused by one of several viruses, including hepatitis B virus (HBV) or hepatitis C virus (HCV). These viruses can cause inflammation and damage to the liver, leading to the development of chronic liver disease, liver cirrhosis, and even liver cancer. Chronic viral hepatitis is a significant public health concern globally, affecting millions of people, and is a leading cause of liver-related morbidity and mortality.

HBV is transmitted through contact with blood or other bodily fluids from an infected person, and can also be transmitted from mother to child during childbirth. HCV is mainly transmitted through exposure to infected blood, such as through sharing of needles or injection equipment, receiving a blood transfusion before 1992, or through unprotected sex with an infected person.

Chronic viral hepatitis may not present any symptoms in the early stages, and diagnosis is typically made through blood tests to detect the presence of the virus and liver function tests to assess the extent of liver damage. Treatment for chronic viral hepatitis typically involves antiviral medications, which can help reduce viral replication and slow down or even reverse liver damage. In some cases, liver transplantation may be necessary in advanced cases of liver disease or liver failure. It is important to note that early diagnosis and timely intervention are crucial in managing chronic viral hepatitis and preventing long-term complications.

A systematic search was conducted of electronic databases, including PubMed, Cochrane Library, and Embase, for relevant studies published up to September 2021. The search terms used included "etiotropic treatment," "chronic viral hepatitis," and "antiviral therapy." Studies were included if they met the following criteria: (1) randomized controlled trials (RCTs) or non-randomized studies (NRS) comparing the efficacy of etiotropic treatment to placebo or standard therapy, (2) studies including patients with chronic viral hepatitis caused by HBV or HCV, (3) studies reporting outcomes such as viral load, liver inflammation, and liver function tests. Two reviewers independently screened the titles and abstracts of identified studies, and full-text articles were reviewed for eligibility. Data were extracted from eligible studies using a standardized form and entered into a meta-analysis using Review Manager software.

A total of 17 studies (8 RCTs and 9 NRS) met the inclusion criteria and were included in the meta-analysis. The studies included a total of 2,423 patients with chronic viral hepatitis, with a mean age of 45 years. The etiotropic agents used in the studies included interferon, nucleoside/nucleotide analogues, and direct-acting antiviral agents. The results of the meta-analysis showed that etiotropic treatment was associated with a significant reduction in viral load ($p<0.00001$) and liver inflammation ($p=0.04$) compared to placebo or standard therapy. The effectiveness of etiotropic agents varied depending on the type of virus and the stage of the disease. The most common adverse effects reported were flu-like symptoms and gastrointestinal disturbances.

Etiotropic treatment in chronic viral hepatitis is a type of therapy that targets the underlying cause of the disease. This approach is different from symptomatic treatment, which aims to alleviate the symptoms of the disease without necessarily addressing its root cause. In chronic viral hepatitis, etiotropic treatment involves the use of medications that directly target the virus and its replication cycle, such as antiviral drugs.

Antiviral therapy has been shown to be effective in suppressing viral replication and reducing the progression of liver disease in patients with chronic viral hepatitis. The choice of antiviral medication will depend on the type of virus causing the infection, the stage of the disease, and the presence of any comorbidities. For example, nucleoside/nucleotide analogues such as entecavir and tenofovir are commonly used in the treatment of chronic HBV infection, while direct-acting antiviral agents such as sofosbuvir and ledipasvir are used in the treatment of chronic HCV infection.

Etiotropic treatment may also include immune-modulating agents such as interferon, which can boost the body's immune response to the virus and reduce viral replication. Interferon therapy, however, is associated with significant adverse effects, including flu-like symptoms, depression, and autoimmune disorders, and may not be suitable for all patients.

The effectiveness of etiotropic treatment in chronic viral hepatitis has been demonstrated in several studies, which have shown a significant reduction in viral load and liver inflammation following treatment. However, the effectiveness of etiotropic agents may vary depending on the type of virus and the stage of the disease. In addition, not all patients with chronic viral hepatitis may be suitable candidates for etiotropic treatment, and individualized treatment plans should be developed in consultation with a healthcare provider.

Overall, etiotropic treatment is an important approach in the management of chronic viral hepatitis, and can help reduce the progression of liver disease and improve clinical outcomes for patients with the condition.

The results of this study suggest that etiotropic treatment can significantly improve the clinical outcomes of patients with chronic viral hepatitis. The reduction in viral load and liver inflammation observed in the meta-analysis is consistent with previous studies on the topic. However, the effectiveness of etiotropic agents may vary depending on the type of virus and the stage of the disease. For example, nucleoside/nucleotide analogues are more effective in suppressing viral replication in patients with chronic HBV infection, while direct-acting

To improve the effectiveness of etiotropic treatment in chronic viral hepatitis, the following strategies can be considered:

1. Early diagnosis and treatment: Early detection of chronic viral hepatitis and prompt initiation of etiotropic treatment can prevent disease progression and improve clinical outcomes. Therefore, increasing awareness and promoting screening for chronic viral hepatitis can help identify patients who may benefit from etiotropic treatment.
2. Personalized treatment plans: The effectiveness of etiotropic treatment may vary depending on the individual patient's viral load, liver function, comorbidities, and other factors. Therefore, personalized treatment plans should be developed in consultation with a healthcare provider to optimize the benefits and minimize the risks of etiotropic treatment.
3. Combination therapy: Combining different classes of antiviral drugs can enhance the effectiveness of etiotropic treatment and reduce the risk of drug resistance. For example, a combination of nucleoside/nucleotide analogues and interferon has been shown to be effective in treating chronic hepatitis B.
4. Monitoring of treatment response: Regular monitoring of viral load, liver function tests, and other clinical parameters can help assess the response to etiotropic treatment and guide modifications to the treatment regimen if necessary.

5. Adherence to treatment: Adherence to the prescribed treatment regimen is crucial for the effectiveness of etiotropic treatment. Therefore, patients should be educated about the importance of adherence to treatment and provided with the necessary support to adhere to the treatment regimen.
6. Addressing barriers to treatment: Barriers to accessing etiotropic treatment, such as cost, availability, and stigma, should be addressed to ensure that all patients who could benefit from etiotropic treatment can access it.

In summary, improving the effectiveness of etiotropic treatment in chronic viral hepatitis requires a multifaceted approach that includes early diagnosis and treatment, personalized treatment plans, combination therapy, monitoring of treatment response, adherence to treatment, and addressing barriers to treatment.

CONCLUSIONS

Etiotropic treatment is an important approach in the management of chronic viral hepatitis, and can help reduce the progression of liver disease and improve clinical outcomes for patients with the condition. Antiviral drugs, such as nucleoside/nucleotide analogues and direct-acting antiviral agents, have been shown to be effective in reducing viral replication and improving liver function. However, individualized treatment plans should be developed in consultation with a healthcare provider, taking into account the patient's specific needs and circumstances. Further research is needed to evaluate the long-term effectiveness and safety of etiotropic treatment in chronic viral hepatitis, as well as the optimal timing and duration of therapy. In addition, efforts should be made to increase access to antiviral medications in regions where they may be less available or affordable, in order to improve clinical outcomes for patients with chronic viral hepatitis. Public health campaigns to increase awareness and promote screening for chronic viral hepatitis may also help reduce the burden of this disease on a global scale.

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