SHORTCOMINGS IN THE TREATMENT OF LIVER DISEASES

JIGAR KASALLIKLARINI DAVOLASHDAGI KAMCHILIKLAR

НЕДОСТАТКИ В ЛЕЧЕНИИ ЗАБОЛЕВАНИЙ ПЕЧЕНИ

Khamidov B. A.
Karshi State University
bobir_khamidov@mail.ru
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Keywords: liver diseases, treatment shortcomings, late diagnosis, autoimmune hepatitis, hepatology, individualized therapy, transplantation.

INTRODUCTION

Liver diseases remain a serious medical and social problem because they often progress silently and are diagnosed only after significant structural and functional damage has developed. According to the World Health Organization, viral hepatitis continues to cause a major global disease burden and a high number of deaths each year, which shows that existing treatment opportunities do not always lead to timely and effective clinical outcomes [1], [2]. At the same time, the therapeutic challenge is not limited to viral hepatitis alone. Autoimmune, cholestatic, and metabolic liver diseases also require long-term management, but treatment results are frequently constrained by delayed diagnosis, insufficient etiological clarification, relapse, drug toxicity, and unequal access to advanced care [1], [3], [8].

MAIN PART

One of the leading shortcomings in the treatment of liver diseases is late diagnosis. In many patients, chronic liver injury develops with minimal or nonspecific symptoms, so treatment is started only after fibrosis, cirrhosis, or hepatic failure has already formed. Under such conditions, even modern therapeutic approaches cannot fully reverse the consequences of advanced disease [1], [2]. This means that treatment effectiveness is directly dependent on the timeliness of diagnosis and early etiological identification.

Another important problem is insufficient etiological and immunological stratification before treatment. Different liver diseases may demonstrate similar biochemical abnormalities, but their pathogenetic basis can differ substantially. When autoimmune mechanisms are not recognized early, treatment may be incomplete or poorly targeted. This issue is especially relevant in autoimmune hepatitis, where therapeutic decisions depend on correct recognition of disease activity, immune-mediated liver injury, and appropriate monitoring [3], [4], [5]. Therefore, inadequate immunological assessment weakens the precision of therapy and may delay effective disease control [3], [4].

A further shortcoming lies in the limitations of standard treatment itself. In autoimmune hepatitis, corticosteroids and azathioprine remain the basis of therapy, but these drugs are associated with serious practical disadvantages, including adverse effects, intolerance,

incomplete response, and frequent relapse after discontinuation [3], [4], [5]. For many patients, this means that remission is not always stable and long-term disease control often requires prolonged immunosuppressive treatment [3]. Thus, available treatment is effective in many cases, but it is not ideal in terms of safety, durability, or individual tolerability [3]–[5].

The shortcomings of treatment are also clear in cholestatic liver diseases, especially primary sclerosing cholangitis. Current guidance indicates that there is still no approved therapy that reliably stops disease progression in PSC, and management is often focused on surveillance, symptom relief, and treatment of complications rather than true pathogenetic correction [7]. This demonstrates that for some chronic liver diseases, medicine still lacks sufficiently effective disease-modifying options [7].

In metabolic fatty liver disease with steatohepatitis and fibrosis, therapeutic progress has improved, but limitations remain. The FDA approved the first treatment for patients with liver scarring due to fatty liver disease in 2024, which marked an important advance [6]. However, this also shows that for many years no approved disease-specific pharmacotherapy existed, and even now treatment applies to a limited patient group and must be combined with lifestyle modification [6]. Therefore, pharmacological progress in this field is significant but still incomplete [6].

Another serious shortcoming is insufficient individualization of follow-up. In practice, treatment success is often judged mainly through standard biochemical indicators, whereas persistent inflammatory activity, progressive fibrosis, or recurrence risk may require deeper clinical and immunological reassessment [3]–[5]. Without individualized monitoring, residual disease activity may be underestimated, and therapeutic correction may be delayed [3], [5].

Finally, limited access to transplantation and advanced care remains one of the most serious systemic shortcomings. WHO states that transplantation is often the best, and sometimes the only, life-saving option for people with severe organ failure [8]. At the same time, WHO materials on human organ and tissue transplantation emphasize the ongoing global need to improve availability, ethical access, and oversight in transplantation systems [8], [9]. This means that even where diagnosis is correct, definitive treatment may still remain inaccessible for many patients [8], [9].

CONCLUSION

The treatment of liver diseases in modern medicine has advanced considerably, yet major shortcomings remain. The most important of them include late diagnosis, incomplete etiological and immunological stratification, limitations of standard immunosuppressive therapy, lack of effective disease-modifying drugs for some cholestatic disorders, restricted pharmacological options in metabolic liver disease, insufficient personalized follow-up, and unequal access to transplantation [1]–[9]. These problems show that improving outcomes in hepatology requires not only new medicines, but also earlier diagnosis, more accurate disease classification, better monitoring strategies, and broader access to specialized care [1], [2], [8], [9].

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