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SEROLOGICAL SIGNS OF AUTOIMMUNE HEPATITIS DISEASE

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Abstract: Autoimmune Hepatitis (AIH) is a disease of unknown origin that induces immune reactions against its own tissues. Its main pathogenic mechanism is the loss of tolerance towards its own tissues. Some studies suggest that unknown environmental agents may trigger autoimmune processes in genetically susceptible individuals, leading to chronic inflammatory processes and exacerbating the disease.

Keywords: autoimmune hepatitis, autoimmune hepatitis liver cirrhosis, LKM-1/LC1, sp100, gp210, AMA-M2.

Autoimmune Hepatitis (AIH) is a disease of unknown origin that induces immune reactions against its own tissues. Its main pathogenic mechanism is the loss of tolerance towards its own tissues. Some studies suggest that unknown environmental agents may trigger autoimmune processes in genetically susceptible individuals, leading to chronic inflammatory processes and exacerbating the disease.

The absence of specific pathognomonic signs, the wide range of clinical manifestations, and factors such as the patient's age, gender, and genetic predisposition (involving environmental factors and epigenetic mechanisms) make diagnosing the disease challenging. These differences highlight the need to distinguish clinical phenotypes in patients with AIH, which facilitates timely treatment and achieving positive outcomes. Distinguishing phenotypes is not enough; confirming them is crucial. The AIH phenotype is classified based on the clinical, biochemical, immunological, and morphological features of the disease, while also taking into account the patient's age, gender, and genetic background.

The broad range of clinical manifestations and the lack of definitive laboratory markers complicate the diagnosis. Therefore, diagnostic criteria developed by the international specialists' group (IAIHG) are used for diagnosing autoimmune hepatitis (expanded in 1999 and simplified in 2008). Excluding other liver diseases in the diagnosis of autoimmune hepatitis is of great importance. However, AIH can be diagnosed in conjunction with other liver diseases, which makes the diagnosis even more complicated.

Diagnostic criteria do not always fully assess all AIH clinical phenotypes. It is essential to understand clinical, laboratory, immunological, and morphological variations. For example, antimitochondrial antibodies (AMA) may sometimes not be detected, even though they are traditionally a primary diagnostic marker of the disease. Additionally, drugs (LP) can trigger the development of AIH, which further complicates the diagnosis.

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The clinical manifestations of AIH can vary depending on the form and nature of the disease: acute (often fulminant) and chronic (latent or asymptomatic) forms exist. Diagnostic antibodies, such as pyruvate dehydrogenase E2-subunit antibodies, play a crucial role in diagnosing AIH. These antibodies are found in over 90% of patients with primary biliary cirrhosis and have high sensitivity.

The diagnosis of AIH requires excluding viral hepatitis, drug-induced liver injury, and other liver diseases. Laboratory indicators, such as hypergammaglobulinemia and increased plasma IgG levels, are important markers. IgG levels are used to monitor treatment response and remission. Other biochemical changes are non-specific and can also be seen in other liver diseases. Biochemical markers in blood can normalize spontaneously, even without histological activity, which requires caution in disease evaluation.

Serological markers include SMA, ANA, and anti-LKM1. Anti-SLA is a specific marker for AIH, and these antibodies are found in 99% of patients and are associated with the DRB1*03 allele. Additionally, anti-SLA helps in accurately identifying patients who may require long-term therapy. Anti-SLA antibodies are also found in patients with cryptogenic hepatitis, which aids in identifying patients with more complex diagnoses.

The presence of autoantibodies plays a central role in diagnosing AIH. AIH is classified into type 1 and type 2, and in 70-80% of patients, ANA or smooth muscle antibodies are present at titers of 1:40 or higher. Type 1 may have antibodies against liver and kidney microsomes (anti-LKM1). The presence of antibodies is crucial for diagnosis and classification.

Autoimmune Hepatitis Diagnosis is based on an internationally developed scoring system. This system, described by Waldenström in 1951, is based on clinical and laboratory features. The disease is more common in women, characterized by the presence of specific antibodies, elevated gamma-globulin levels, and a positive response to immunosuppressive treatment. Genetically, it is associated with HLA DR3 or HLA DR4. The progression of the disease varies with age: patients under 30 years old tend to have a more aggressive form, while those over 40 usually exhibit a milder form.

Conclusion: Anti-SLA antibodies are one of the specific features of Autoimmune Hepatitis. These antibodies are found in 10-30% of patients with Autoimmune Hepatitis. Anti-SLA antibodies help differentiate Autoimmune Hepatitis from Cryptogenic Hepatitis and provide an opportunity for effective treatment.

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