

## Hepatitis E virus: an underrecognized clinical challenge

Piotr Kacprzyk<sup>1</sup> , Paweł Piluch<sup>1</sup> , Piotr Głowacki<sup>1</sup>, Maria Maślińska<sup>2</sup> 

<sup>1</sup>"Rheumaticus" Student Research Group, Medical University of Warsaw, Poland

<sup>2</sup>Department of Rheumatology, National Institute of Geriatrics, Rheumatology and Rehabilitation, Warsaw, Poland

**Key words:** hepatitis E virus, immunosuppression, autoimmune diseases, chronic hepatitis

**Introduction:** Hepatitis E virus (HEV) is a widespread, while epidemiologically underassessed, single-stranded, positive-sense RNA virus. Of the four main genotypes, genotypes 1 and 2 occur rather in developing countries, genotype 3 is most common in Europe, and genotype 4 causes infections in East Asia. Risk factors for infection between genotypes include sanitary conditions and drinking contaminated water for genotypes 1 and 2, and consumption of undercooked pork or wild boar meat for genotypes 3 and 4. Receiving blood transfusions is also associated with the risk of transmission.

Hepatitis E virus has recently become the subject of interest beyond the field of infectious disease specialists, as the focus is gradually shifting towards its occurrence in the immunocompromised. It is important to raise awareness among healthcare professionals who may encounter patients with this condition. Therefore, this review aims to provide an up-to-date synthesis of the literature on the topic.

**Material and methods:** The Scopus database was queried with the following search terms: "hepatitis E virus", "HEV", "rheumatology", "connective tissue disease".

**Results:** Of the 277 results obtained, 105 articles were then selected to be included in the review.

**Discussion:** While HEV infection may be asymptomatic, the typical course involves acute hepatitis. Chronic infections also occur, especially in immunocompromised individuals, which also involves those treated for rheumatologic diseases. Genotype 3 and 4 infections are associated with extrahepatic manifestations, such as neurological symptoms, renal complications, acute pancreatitis, cryoglobulinemia, and vasculitis. Molecular mimicry is the proposed mechanism underlying these conditions. The infection is usually self-limiting and does not require treatment. However, patients undergoing immunosuppressive therapy may need a dose reduction or even complete withdrawal from the therapy. Off-label use of ribavirin may be considered.

**Conclusion:** The HEV infection in immunocompromised patients may be severe, leading to diagnostic challenges, severe complications, and treatment dilemmas. To establish optimal prevention and treatment strategies, further research is required.