Editorial

Locally Produced Peginterferon As An Opportunity to Treat HCV in Low and Mid-Income Countries

see the pages 306-312

The hepatitis C virus (HCV) can cause both acute and chronic liver diseases. Chronic hepatitis C often follows a progressive course over many years and can ultimately result in cirrhosis and hepatocellular carcinoma (HCC). These are associated with a severe morbidity and mortality.

In order to prevent the progression of chronic hepatitis C to liver cirrhosis and HCC, antiviral strategies have been developed to eliminate HCV-infection. Since the initial management by interferon (IFN) alpha injections three times per week in the early 1990ies the therapeutic options have greatly improved. The current standard of care for patients with chronic hepatitis C is pegylated interferon alpha (PEG-IFNa) in combination with ribavirin.[1] The attachment of polyethylene glycol to interferon (pegylation) reduces its rate of absorption following subcutaneous injection, reduces renal and cellular clearance and decreases the immunogenicity of the protein. All of these effects enhance the half-life of the pegylated versus the native IFN. The combination of PEG-IFN with ribavirin clearly increase the sustained virological response rates (SVR) in patients as compared to IFNa monotherapy. The overall response rates are greatly different among patients infected with genotype 1 as compared to patients infected with genotypes 2 and 3.

Based on these data and discussed in the consensus conferences several guidelines for the management of patients with HCV-infection have been published.[1]

In this issue of "Archives of Iranian Medicine" Jabbari et al. report the results from a pilot study including 108 patients (63 infected with HCV genotype 1, 45 infected with HCV genotype 2 or 3). These patients were treated according to the international protocols with PEG-IFN alpha 2a produced in Iran and ribavirin for 24 or 48 weeks depending on the genotype. The results clearly show that the locally produced PEG-IFN alpha 2a is highly effective in achieving SVR in 67% of patients infected with genotype 1 and 95% of patients infected with genotype 2 or 3. These data show that PEG-IFN alpha 2a producedin Iran has an antiviral efficiency, comparable to the presently commercially available PEG-IFN alpha 2a (Pegasus) and 2b (PegIntron).

The production of PEG-IFN alpha 2a in Iran should further contribute to the availability of this drug and its implementation for the antiviral treatment of patients with chronic hepatitis C in Iran and elsewhere.

Given the recent development in personalized medicine, there is an individualized approach to the treatment of chronic hepatitis C with PEG-IFN and ribavirin depending on the rapidity of the virological response (rapid virological response, early virological response, slow virological response). Furthermore, a single nucleotide polymorphism in the interleukin 28B (IL28B) gene has been discovered that predicts the response to therapy.[2–4] In this context future studies in Iranian patients should identify the IL28B genotype and their response to antiviral therapy.

Prof. Dr.Dr.h.c.mult. H.E. Blum
Hugstetter Str. 55
79106 Freiburg, Germany
Tel: 0761 270-3403
Fax: 0761 270-3610
E-mail: hubert.blum@uniklinik-freiburg.de

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