

Interferon Monotherapy in Major Thalassemic Patients with Hepatitis C Infection

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ABSTRACT

Background

Major thalassemia is the most common form of anemia requiring blood transfusion in Iran. Since ribavirin provokes anemia in the treated patients, interferon monotherapy may be an appropriate treatment in major thalassemic patients. The aim of this study was to determine the safety and efficacy of interferon monotherapy in thalassemic patients with hepatitis C virus infection.

Materials and Methods

Forty major thalassemic patients (20 male), with hepatitis C infection (detectable HCV RNA* by qualitative PCR** amplification assay) and elevated liver enzymes were enrolled. Liver biopsy was done for all patients. Then the patients were treated with interferon (3 MU, three times per week) for six months. They were followed by HCV RNA at the end of treatment, and at 6, 12, 24, 36, and 48 months later. Primary outcome measure was sustained virologic response defined by undetectable serum HCV RNA 6 months after end of treatment. Secondary endpoint was negative HCV RNA at the end of follow up (48 months post-treatment).

Results

Mean age of the patient at the beginning of the study was 17.37±5 years. Three patients discontinued treatment because of interferon side effects. Twenty six (65% on intention to treat analysis) had undetectable HCV RNA 6 months after end of treatment but eleven of them became HCV RNA positive on follow up. Finally, 15 patients (37.5%) had undetectable HCV RNA at the end of follow up.

Conclusions

Interferon monotherapy is an effective treatment for major thalassemic patients with HCV infection. Definition of sustained virologic response for hepatitis C may require revision in high risk patients.

Keywords: Interferon, Major thalassemia, Hepatitis, Monotherapy, Iran

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BACKGROUND

Major thalassemia (MT) is the most common form of anemia requiring blood transfusion in Iran. HCV infection is found in more than 60% of MT

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patients throughout the world.(1-3), The probability of transmission of the virus has been reduced significantly due to recent vigilant screening of blood donors(4); however, similar to the other part of the world, more than 60% of multitransfused patients with major thalassemia are infected by the virus in Iran.(5)

* Hepatitis C Virus Ribonucleic Acid

** Polymerase Chain Reaction