



The Prevalence and the Quantification of Hepatitis C Virus among Thalassemia Patients using ELISA and PCR in Diyala Province

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Abstract

Background: Hepatitis C virus is the most common cause of post-transfusion hepatitis and end-stage liver disease in many countries. Regular blood transfusion in patients with hereditary hemolytic anemia, particularly thalassemia, has improved their overall survival, but carries a definite risk of acquisition of blood borne virus infections, especially viral hepatitis.

Objective: To determine the prevalence and the quantification of HCV infection among thalassemia patients in Diyala province by using enzyme-linked immunosorbent assay and polymerase chain reaction techniques.

Patients and Methods: This study was conducted on 215 thalassemia patients in the thalassemia unit in Al-Batool Teaching Hospital of Maternity and Pediatrics in Baqubah city-Diyala province during the period from September 2013 to December 2015. Demographic data were obtained from the patients records. Sera were tested with anti-HCV assays by use enzyme linked immunosorbent assay and positive result were tested by a Real time PCR technique to assess HCV infection.

Results: A total of 215 thalassemic patients, 26 (12.1%) patients were HCV positive by enzyme linked immunosorbent assay and only 3 of these 26 patients were positive by RT-PCR. The rate of HCV infection in thalassemic patients is associated directly with the number of blood transfusions and the age of the patients and It is more in the period before 1996.

Conclusion: The prevalence of HCV infection in thalassemic patients is relatively low in Diyala province in comparison with other areas and PCR technique is essential to detect and treat active infection.

Key words: Prevalence, thalassemia, hepatitis C virus.

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