

The Role Of Blood Transfusion In HCV Infection Testing: Ab, RNA & Genotypes For HCV in Baghdad

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ABSTRACT

Introduction	Hepatitis C Virus (HCV) recently was identified as a major cause of post transfusion hepatitis worldwide.
Objective	To evaluate the role of blood transfusion on the prevalence of HCV infection by testing antibody and RNA of HCV and to detect if blood transfusion acts as risk factor for HCV infection.
Methods	Sera from 3491 pregnant women were investigated for the presence of HCV antibodies (anti-HCV) by using third generation of enzyme immunoassay (EIA-3) as screening test followed by immunoblot assay (Lia Tek-III). In addition 94 sera of the samples were subjected to molecular analysis (at laboratories of Sorin BioMedica, Italy) for the detection of viral RNA and genotypes of HCV using RT-PCR and DNA Enzyme immunoassay (DEIA) method.
Results	This study reveals that seroprevalence rate of HCV specific Ab and RNA are significantly higher (16.32 %, 80%) among women with a history of blood transfusion, compared to those (2.53%, 56.5%) with no such history $P=0.0001$, $P=0.01$. There is a significant direct linear correlation between number of blood transfused and the seropositive rate of anti-HCV ($r=0.7$, $p=0.046$). Based on multivariate analysis, interestingly, this study demonstrates that blood transfusion significantly act as unconfounding risk factor for acquiring HCV infection (adjusted OR = 1.938, 95% C.I = 1.646-2.28). The risk of exposure increases with increased number of blood transfused. Although there is no significant association between, HCV genotypic distribution and history of blood transfusion, high proportion of women with a history of blood transfusion where harboring HCV genotype – 4 or 1b, 50%,40%, respectively.
Conclusions	This study shows that blood transfusion acts as a risk for acquiring HCV infection. Strict screening of blood donor for HCV-Ab and / or RNA is recommended.