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Short Communication**Hepatitis C Virus Infection and HCV Genotypes of Hemodialysis Patients**K Samimi-rad¹, M Hosseini², B shahbaz¹¹Dept. of Virology, School of Public Health, Tehran University of Medical Sciences, Iran²Dept. of Epidemiology and Biostatistics, School of Public Health, Tehran University of Medical Sciences, Iran **Corresponding Author:**

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Abstract:

Background: To evaluate the prevalence of hepatitis C by antibody testing, HCV-RNA detection by PCR and relative risk factors of HCV infection among HD patients and staff members in Markazi Province/Iran. The other purpose was to determine genotypes of HCV in this population.

Methods: The study group consisted of 204 HD patients and 47 staff members from all 9 dialysis centers in Markazi Province, Iran. Anti-HCV antibodies were tested using a third generation ELISA and confirmed by RIBA. HCV RNA was determined by RT-PCR and genotyping was performed by a reverse hybridization assay (LIPA).

Results: The overall prevalence of HCV (HCV antibody and HCV-RNA) was 5.4%. Female sex ($P=0.019$), duration of dialysis ($P=0.003$) and kidney transplant ($P=0.049$) were significantly correlated with HCV infection. The predominant subtype was HCV-1a, detected in 4(50%) of the 8 HD patients. Genotype 4, 3a and 1b were found in 2(25%), 1 (12.5%) and 1(12.5%) patients respectively. The prevalence of anti-HCV among staff members of HD units was 0%.

Conclusion: The presence of anti HCV positive patients who had never been transfused, high prevalence of genotype 4 in this population, duration of HD as a risk factor for HCV positivity and non significant association between blood transfusion and HCV infection suggest nosocomial transmission of the virus in dialysis units that needs to be confirmed by phylogenetic analysis of subgenomic regions of HCV. HD staff members dose not seem to be at increased risk of hepatitis C despite the frequent blood exposure and lack of strict adherence to universal infection control precautions.

Keywords:*Hepatitis C virus . Hemodialysis . HCV genotypes . Iran***TUMS ID: 11891**

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