

PREVALENCE OF HEPATITIS C VIRUS INFECTION IN CHRONIC KIDNEY DISEASE PATIENTS ON HEMODIALYSIS: A SINGLE CENTRE PROSPECTIVE OBSERVATIONAL STUDY IN NORTH INDIAAmit Badgal¹, Jivesh Mittal², Hilal Ahmad Tali³, Rakesh Aseri⁴, Amrita⁵**HOW TO CITE THIS ARTICLE:**

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ABSTRACT: The chronic kidney disease (CKD) patients undergoing hemodialysis are predisposed to Hepatitis C virus (HCV) infection and serve as reservoir of infection to the hospital staff. The data on prevalence of HCV infection in patients receiving hemodialysis as renal replacement therapy is scarce and this highlights the significance of this study. 3 (7.1%) patients were anti-HCV ELISA positive whereas 39(92.9%) were anti-HCV negative.

KEYWORDS: Chronic kidney disease, hemodialysis, hepatitis c virus, prevalence, anti-HCV ELISA.

INTRODUCTION: HCV infection is associated with higher risk and shorter time to CKD despite having a lower prevalence of many CKD risk factors.^[1] Various studies from different parts of the world have shown higher prevalence of hepatitis C virus infection among CKD patients on hemodialysis in spite of screening and preventive measures.^[2] The mortality in HCV infected hemodialysis patients is greater than non-HCV infected haemodialysis patients.^[3] The data on prevalence of HCV among patients on hemodialysis in developing countries is scarce.^[4] The present study was conducted to know the prevalence of HCV among patients on hemodialysis in lower Himalayan region.

MATERIALS AND METHODS: The present study was conducted on all the CKD patients (Newly diagnosed as well as older) undergoing hemodialysis at MMMCH, Solan over a period of 2 months from August 2014 to September 2014. The enrolled patients were screened with anti-HCV ELISA (3rd Generation) after written informed consent and were counseled about the implications of a positive test.

RESULTS AND DISCUSSION: A total of 42 CKD patients who underwent hemodialysis during the study period were screened for anti-HCV. The mean age of the patients was 45.43±15.41 years. Pahwa N et al (2013) in their study had reported a mean age of 43.59±13.28 years.^[5] 25(59.5%) patients were males and 17(40.5%) were females. Jasuja S et al (2010) had similarly reported that more male patients (64.70%) were undergoing hemodialysis than female patients (35.3%).^[6] We found that 3(7.1%) patients were anti-HCV positive whereas 39 (92.9%) were anti-HCV negative. Jasuja S et al (2010) had reported that 2.3% patients with negative HCV RNA and 72.7% patients with positive HCV RNA were anti-HCV positive.^[6] Pahwa N et al (2013) had reported anti-HCV seroprevalence of 12.67% in 142 patients in a multicentre study. The data from India on the prevalence rates of hepatitis virus infections is lacking.^[5] The anti-HCV ELISA may be false negative during the window period.^[7] In a report of 2, 576 patients, 6 (0.23%) were seronegative but HCV PCR positive.^[8] PCR can detect HCV RNA within 1-3weeks of exposure prior to the elevation in aminotransferases^[9] but its use as a screening test is limited by the cost.

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CONCLUSION: There is high prevalence of HCV infection in CKD patients on hemodialysis. The early detection of HCV infection is limited by the inability to adopt HCV RNA PCR as the screening test due to high cost in the resource limited scenario. Further studies may focus on elevations in transaminases level in CKD patients on hemodialysis as predictor of HCV infection.

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