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Seronegative Occult Hepatitis C Virus Infection (OCI) in a Main Haemodialysis Centre In Pahang, Malaysia

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Abstract

Introduction: Occult HCV infection has a predilection for specific populations such as haemodialysis (HD) patients. The exact natural course, epidemiology, pathogenesis and clinical importance of OCI are unknown. We investigated the existence of OCI among local patients undergoing routine HD at a referral hospital in Pahang, Malaysia. Methods: Serum and peripheral blood mononuclear cells (PBMCs) were collected from peripheral venous blood samples of seropositive (anti-HCV positive) and seronegative (anti-HCV negative) HD patients as well as healthy individuals (negative control group). Inclusion criteria for the seronegative patients included elevated liver enzymes. Both conventional PCR and strand-specific PCR were used to detect the viral RNA and to indicate active viral replication in PBMCs respectively. Direct DNA sequencing was done to confirm the viral HCV RNA and their genotypes. Results: In the majority (90-100%) of seropositive chronic hepatitis C patients, viral RNA was detected in both serum and PBMCs. Meanwhile, out of 22 seronegative patients, 6 (27%) showed active viral replication in PBMCs but no detectable viral RNA presence in the serum. None of the negative control group had detectable viral RNA. All seronegative patients with OCI were infected with HCV genotype 3 and two of them (2/6) had a slight elevation of their liver enzymes. Conclusion: Seronegative OCI does exist among local hemodialysis patients, with normal or persistently abnormal liver enzyme values. Further investigation is needed to study the mode of viral transmission and clinical significance of OCI in HD setting.

Keywords

Author Keywords: Occult Hepatitis C; Chronic Hepatitis C; Peripheral Blood Mononuclear Cells and Haemodialysis Unit
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