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CHARACTERIZATION OF OCCULT HEPATITIS C VIRUS (HCV) INFECTION AMONG HEMODIALYSIS PATIENT

Siti Nurul Fazlin Abdul Rahman[1], Hairul Aini binti Hamzah[1], Mohammed Imad Mustafa[1] and Mohamed Hadzri Hasmoni[1]

[1]*International Islamic University Malaysia, Pahang, Malaysia*

Presenter: Siti Nurul Fazlin Abdul Rahman, fazlin89@yahoo.com

Introduction: The existence of new entity called occult hepatitis C virus (HCV) has become a raising and escalating concern among healthcare professionals worldwide. It is defined by the presence of viral RNA in liver and/or peripheral blood mononuclear cells (PBMCs) within non HCV-infected patients. Previous study had shown the occult HCV is infectious and capable of transmitting the virus to another host. Till today, HCV infection remains common among hemodialysis patients despite having the best preventive plans. Because of this, there is a significant concern about the source of viral transmission. The aim of the study was to identify and characterize occult HCV infection in PBMC sample of hemodialysis patients. This was an observational and cross sectional study.

Materials and method: PBMCs were isolated from the whole blood using Ficoll-gradient centrifugation technique. The PBMCs were then subjected for cell counting and stored in -70^{O}C until further used. HCV RNA were extracted from these cells and viral RNA were subjected for molecular assays, immune cells analysis and cells culture.

Results: PBMCs were isolated from eleven (11) study patients and five (5) anti-HCV positive (control) patients. By using automated flow cytometry, PBMCs of each sample were counted and the average number of cells obtained range from $2x10^4$ to $5x10^6$ cells/ ml. Viral RNAs were extracted and quantitatively measured by using NanoDrop Spectrophotometers. The viral RNAs concentration obtained were between 24.7 and 258.9 ng/ml. The RNAs would be subjected for purification (ethanol precipitation) and further assays.

Conclusion: The final findings might contribute to the clinical management of dialysis patients.