DETECTION AND GENOTYPING OF HEPATITIS C VIRUS AMONG
DIALYSIS PATIENTS IN TIRUNELVELI MEDICAL COLLEGE

Background:

Hepatitis C virus (HCV) infection in patients undergoing dialysis is an emerging major condition globally. This parenterally transmitted infection lead to persistent infection, progressive liver disease, cirrhosis, hepatocellular carcinoma. The present study was undertaken to determine the prevalence of HCV infection and genotypes prevalent in these patients.

Materials and Methods:

A total of 100 chronic kidney disease patients(CKD) on dialysis were studied. All the patients were tested for anti-HCV antibodies by immunochromatography(ICT), Enzyme linked immunosorbent assay(ELISA) and HCV-RNA by Real-time Polymerase Chain Reaction (RT-PCR) and efficacy of tests were evaluated. Detailed history regarding demography, duration of dialysis, number of dialysis centres, blood transfusion were collected.

Results:

The overall HCV prevalence was 9 % with genotype 1 most prevalent in these patients. Total of 9 patients were HCV positive. 6 (67%) were positive for both RT-PCR and ELISA. One patient (11%) was positive for HCV by RT-PCR and negative by ELISA while two (22%) patients were negative for RT-PCR and positive for ELISA.
Conclusion:

PCR is accredited as a specific, reliable method recommended for establishing exact, final diagnosis of these patients. Third generation ELISA are easy to use, cost-effective and having low variability. Best way is to combine both Immunoenzymatic and molecular method for detecting HCV and preventing further HCV transmission in these patients. Longer duration of dialysis and multiple dialysis centres visit were the major risk factors for HCV positivity. Adopting strict universal precautions are essential in reducing HCV transmission.

Keywords: HCV, Dialysis, CKD, ICT, ELISA, PCR