

## **STUDY ON SEROPREVALENCE AND GENOTYPES OF HEPATITIS C VIRUS INFECTION IN PATIENTS WITH CHRONIC LIVER DISEASE ATTENDING A TERTIARY CARE HOSPITAL**

### **Abstract:**

**Introduction:** Hepatitis C virus is an important cause of chronic hepatitis and primary hepatocellular carcinoma. HCV genotypes can vary in pathogenicity and can have impact on treatment outcome. The high rate of chronicity and lack of successful vaccine makes Hepatitis C virus a serious threat to public health. **AIM:** The present study is undertaken to study the sero-prevalence and predominant genotypes present among chronic liver disease patients attending medical gastroenterology and allied departments in Coimbatore Medical College. **Material and Methods:** 200 patients with chronic liver disease subjected to Anti-HCV ELISA and RT-PCR. Genotyping is done by RT-PCR. **Results:** Out of 200, 56 of them ELISA positive, 29 of them RT-PCR positive. Among 29 RT-PCR positives 3 patients were ELISA negative. Genotype was done by RT-PCR. Genotype 3 was observed in 17 cases followed by genotype 4 in 6, genotype 1 in 4 and genotype other than 1,2,3,4 in 2 cases. **Conclusion:** Sero-prevalence rate was high among CLD patients than general population. Significant association of Hepatitis C virus and chronic liver disease was observed in the present study. In the absence of vaccine, primary prevention of Hepatitis C should be targeted to reduce transmission of virus. Third generation ELISA is an useful cost effective screening test for serological diagnosis of HCV. It has many advantages like they are cost effective & easy to use. RT-PCR is recommended in a addition to screening by ELISA to confirm seropositivity as ELISA may produce false positive results due to non-specific binding antibodies, cross reaction with circulating organisms and in spontaneously cleared cases. The present study highlighted that HCV genotype 3 is the predominant genotype among chronic liver disease in our geographical area. It is expected that distribution of other genotype may be due to migration of people, changes in high risk behaviour and lifestyle.

**KEY WORDS:** Hepatitis C virus, ELISA, RT-PCR, Cirrhosis, Hepatocellular carcinoma, Genotypes.