

Hepatitis B, Hepatitis C and HIV Infections and Associated Risk Factors among Substance Abusers in Mekelle Substance Users Treatment and Rehabilitation Centers, Tigray, Northern Ethiopia

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Abstract : Background: Hepatitis B virus (HBV), Hepatitis C virus (HCV) and Human Immunodeficiency Virus (HIV) constitute serious healthcare problems worldwide. Blood-borne pathogens HBV, HCV and HIV are commonly associated with infections among substance or Injection Drug Users (IDUs). The objective of this study was to determine the prevalence of HBV, HCV, and HIV infections among substance users in Mekelle Substance users Treatment and Rehabilitation Centers. Methods: A cross-sectional study design was used from Dec 2020 to Sep / 2021 to conduct the study. A total of 600 substance users were included. Data regarding the socio-demographic, clinical and sexual behaviors of the substance users were collected using a structured questionnaire. For laboratory analysis, 5-10 ml of venous blood was taken from the substance users. The laboratory analysis was performed by Enzyme-Linked Immunosorbent Assay (ELISA) at Mekelle University, Department of Medical Microbiology and Immunology Research Laboratory. The Data was analyzed using SPSS and Epi-data. The association of variables with HBV, HCV and HIV infections was determined using multivariate analysis and a P value < 0.05 was considered statistically significant. Result: The overall prevalence rate of HBV, HCV and HIV infections were 10%, 6.6%, and 7.5%, respectively. The mean age of the study participants was 28.12 ± 6.9 . A higher prevalence of HBV infection was seen in participants who were users of drug injections and in those who were infected with HIV. HCV was comparatively higher in those who had a previous history of unsafe surgical procedures than their counterparts. Homeless participants were highly exposed to HCV and HIV infections than their counterparts. The HBV/HIV Co-infection prevalence was 3.5%. Those doing unprotected sexual practices [P= 0.03], Injection Drug users [P= 0.03], those who had an HBV-infected person in their family [P=0.02], infected with HIV [P= 0.025] were statistically associated with HBV infection. HCV was significantly associated with Substance users and previous history of unsafe surgical procedures [p=0.03, p=0.04], respectively. HIV was significantly associated with unprotected sexual practices and being homeless [p=0.045, p=0.05] respectively. Conclusion-The highly prevalent viral infection was HBV compared to others. There was a High prevalence of HBV/HIV co-infection. The presence of HBV-infected persons in a family, unprotected sexual practices and sharing of needles for drug injection were the risk factors associated with HBV, HIV, and HCV. Continuous health education and screening of the viral infection coupled with medical and psychological treatment is mandatory for the prevention and control of the infections.

Keywords : hepatitis b virus, hepatitis c virus, HIV, substance users

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