

Seroprevalence and Associated Factors of Hepatitis B and Hepatitis C Viral Infections Among Prisoners in Tigray, Northern Ethiopia

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Abstract : Background: Hepatitis B and C viruses are important health and socioeconomic problem across the globe, with a remarkable number of diseases and deaths in sub-Saharan African countries. The burden of hepatitis is unknown in the prison settings of Tigray. Therefore, we aimed to describe the seroprevalence and associated factors of hepatitis B and C viruses among prisoners in Tigray, Ethiopia. Methods: A cross-sectional study was carried out from February 2020 to May 2020 at the prison facilities of Tigray. Demographics and associated factors were collected from 315 prisoners prospectively. Five milliliters of blood were collected and tested using rapid tests kits of HBsAg (Zhejiang orient Gene Biotech Co., Ltd., China) and HCV antibodies (Volkan Kozmetik Sanayi Ve Ticaret Ltd. STI, Turkey). Positive samples were confirmed using ELISA (Beijing Wantai Biological Pharmacy Enterprise Co. Ltd). Data were analyzed using the SPSS version 20, and $p < 0.05$ was considered statistically significant. Results: The overall seroprevalence of HBV and HCV were 25 (7.9%) and 1 (0.3%), respectively. The majority of hepatitis B viral infections were identified from the age groups of 18-25 years (10.7%) and unmarried prisoners (11.8%). Prisoners greater than 100 per cell (AOR=3.95, 95% CI=1.15-13.6, $p=0.029$) and with a history of alcohol consumption (AOR=3.01, 95% CI=1.17-7.74, $p=0.022$) were significantly associated with HBV infections. Conclusion: The seroprevalence of HBV among prisoners was nearly high or borderline, with a very low HCV prevalence. HBV was most prevalent among young adults, those housed with a large number of prisoners per cell, and those who had a history of alcohol consumption. This study recommends that there should be prison-focused intervention, including regular health education, with the emphasis on the mode of transmission and introducing HBV screening policy for prisoners, especially when they enter the prison.

Keywords : seroprevalence, HBV, HCV, prisoners, tigray

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