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Prevalence of hepatitis delta virus in patients referred to medical diagnostic and reference laboratories of IBTO

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Background and Aim: Hepatitis delta Virus (HDV) is a small spherical, enveloped virus which requires hepatitis B virus (HBV) to replicate and proliferate. It has been reported that 15-20 million people are infected with HDV worldwide. Infection with HDV is almost limited to persons who are at high risk of HBV infection especially receivers of blood products. This virus can cause severe liver diseases such as cirrhosis and hepatocellular carcinoma. So the aim of this study is to determine the prevalence of HDV in patients referred to medical diagnostic and reference laboratories of IBTO for better management of infected people. Methods: In this cross-sectional study, we reported HDV-infected patients who referred to medical diagnostic and reference laboratories of IBTO from March 2015 to December 2016. Eventually, 188 patients were included. ELISA assay with DIA.PRO kit and DYNEX.MRX microplate reader was performed for detection of anti-HDV antibody. Results are interpreted as a ratio between the cut-off value and the sample OD450nm or Co/S. Co/s < 0.9 were interpreted as negative, 0.9-1.1 as equivocal and >1.1 as positive results. Age and sex of patients were collected by checklists from patients' files. SPSS (version 19) software we used for data analysis. **Results:** 188 patients consisting of 10 males (90.9%) and 1 female (9.1%) with the mean age of 47 ± 13.6 years participated in the study. The mean of Co/s was 30.5 ± 27.9 with maximum Co/s value of 90.30. Among these patients, 7 of them were HBV-infected or had a history of HBV infection. Conclusion: According to the prevalence of HDV, a possibility of HDV infection should be considered in symptomatic patients, in patients without HBV/ HCV infection and in HBV-infected patients. Detection of HDV total antibodies in suspected patients is also needed and should be done in specialized centers like IBTO for classification of the illness and the monitoring of the seroconversion event.

Keywords: Prevalence, Hepatitis delta virus, prevalence