Evaluation of the Hepatitis C Virus and Classical and Modern Immunoassays Used Nowadays to Diagnose It in Tirana

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Abstract: HCV is a hepatotropic RNA virus, transmitted primarily via the blood route, which causes progressive disease such as chronic hepatitis, liver cirrhosis, or hepatocellular carcinoma. HCV nowadays is a global healthcare problem. A variety of immunoassays including old and new technologies are being applied to detect HCV in our country. These methods include Immunochromatography assays (ICA), Fluorescence immunoassay (FIA), Enzyme linked fluorescent assay (ELFA), and Enzyme linked immunosorbent assay (ELISA) to detect HCV antibodies in blood serum, which lately is being slowly replaced by more sensitive methods such as rapid automated analyzer chemiluminescence immunoassay (CLIA). The aim of this study is to estimate HCV infection in carriers and chronic acute patients and to evaluate the use of new diagnostic methods. This study was realized from September 2016 to May 2018. During this study period, 2913 patients were analyzed for the presence of HCV by taking samples from their blood serum. The immunoassays performed were ICA, FIA, ELFA, ELISA, and CLIA assays. Concluding, 82% of patients taken in this study, resulted infected with HCV. Diagnostic methods in clinical laboratories are crucial in the early stages of infection, in the management of chronic hepatitis and in the treatment of patients during their disease.

Keywords: CLIA, ELISA, Hepatitis C virus, immunoassay

Conference Title: ICIID 2019: International Conference on Immunology and Infectious Disease

Conference Location: Dublin, Ireland Conference Dates: December 19-20, 2019