

ROUTINE SEROLOGICAL TESTING FOR DETERMINATION OF EBV INFECTION

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DOI: 10.5937/BatutPHCO24030M

Background: Epstein-Barr virus (EBV) or human herpesvirus 4 is one of the most common human widespread viruses, infecting more than 90% of the world's population. After primary infection, which is often unrecognized or asymptomatic, the virus persists for life in infected host cells. In children and young people, the primary infection can manifest itself in the form of a clinical syndrome of infectious mononucleosis (IM). Early, accurate and complete results of laboratory tests are vital for timely diagnosis, appropriate treatment and cure. A key challenge for the physician, in cases where the disease may present atypically, is to distinguish bacterial infections from early acute IM.

Methods and Objectives: The aim of our analysis was to reveal the frequency of seropositive patients with suspected EBV infection, to determine the serological profile of persons with active primary infection and persons with persistent infection and the percentage of incomplete requests where the clinician requested only IgM or IgG antibodies to EBV, in the period of the first six months of 2024, in 175 outpatients who were referred to the Center of Microbiology, ZZJZ Pančevo, due to suspicion of IM. According to the instructions of prescribing physicians, we performed serum analysis for the presence of IgM VCA, IgG VCA and IgG EBNA antibodies on EBV, using an enzyme-linked immunosorbent assay (ELISA) manufactured by TestLine Clinical Diagnostics s.r.o. The obtained data were analyzed and statistically processed.

Results: Out of all the tested patients, 48 of them were referred for analysis of the detection of IgM antibodies to EBV, among which the presence was proven in 39.5%. In 10 patients, only IgG antibodies were sought. Among other patients, acute EBV infection was proven in 19.65%, old persistent infection in 65.8% and absence of immunity in 15 patients (12.8%). We detected an atypical serological profile in 7 patients. The distribution according to age and gender does not deviate from the results found in the literature.

Conclusions: A typical serological profile was detected in the largest number of those we tested, but this study points out that clinical diagnosis as well as additional tests in the confirmation of IM are important for the interpretation of the obtained serological results.

Keywords: EBV, Infectious mononucleosis, serology, VCA, ELISA