

EV0402

ePoster Viewing

Clinical ID: community-acquired infections including CAP, sepsis, STD, ...

**Immune response to Epstein-Barr virus infection in juvenile population with infectious mononucleosis syndrome**

I. Hadji Petrusheva Meloska<sup>1</sup>, K. Icev<sup>1</sup>, J. Branko<sup>1</sup>, A. Hadji-Petrusheva Jankijevikj<sup>2</sup>, B. Curcic-Trajkovska<sup>2</sup>

<sup>1</sup>*Avicena Laboratory, Skopje, Macedonia*

<sup>2</sup>*Clinical Hospital Acibadem Sistina, Skopje, Macedonia*

Epstein-Barr virus (EBV) infects over 90% of the human population worldwide. Primary EBV infection occurs during childhood and is asymptomatic, or is associated with the clinical syndrome of infectious mononucleosis (IM). Detection of heterophile antibodies, being positive in up to 85% of cases, is widely used for diagnosis of IM. However, there are antibodies to several antigen complexes that more precisely detect EBV: viral capsid antigen (VCA), early- (EA), and nuclear antigen (EBNA). The aim of our study was to determine the classes of antibodies to different EBV antigens in patients with infective mononucleosis syndrome.

The investigation included 120 sera from juvenile patients (age 4-22years) with IM syndrome admitted in our laboratory during a period of two years (2011-2013). Full blood count and IM serology testing were performed with: MNI test (Fumouse, France) and VIRapid Mono M&G (Vircell, Spain) for specific EBV antibodies according the manufacturer recommendations. On a selected group of patients further testing for CMV infection was performed using Immulite, Siemens system.

Out of the total of 120 patients, 90 had both clinical symptoms and full blood parameters suggestive for IM. The two serological tests for IM performed on those 120 sera revealed the following results: out of 70 sera (58%) positive to MNI test, 60 were IgM positive for VCA only and 5 were IgM positive both for EA and VCA. However, out of the 30 MNI negative sera, 14 had IgM VCA, 6 had IgG VCA and 10 were negative for all EBV markers. In the 10 patients with IM syndrome, but negative for EBV infection, further testing for CMV was undertaken; one child had positive CMV IgM antibodies and 2 were CMV IgG positive.

The presence of IgM antibodies to VCA and EA, is indicative for acute infection, which was confirmed with the specific EBV test, since MNI test lacks the sensitivity needed for this infection. However, sometimes when the case is very suspicious for IM and other EBV markers are negative, further testing for other viruses like CMV is recommended.