

EBV, Epstein Barr virus, Mononucleosis

General:

Synonyms: Morbus Pfeiffer, Pfeiffer's disease, "Kissing-Disease", "KO" virus, mononucleosis. Epstein Barr virus belongs to herpes viruses (DNA virus) and is transmitted by droplet infection. The infection occurs usually in elder children, teens or young adults. It persists in the organism throughout a person's whole life, associations with fibromyalgia syndrome, African Burkitt's lymphoma, and with nasopharyngeal carcinoma have been described. The endemic infection of the population up to 30 years is approx. 60%. After an incubation period of 10-14 days up to several weeks, the following **symptoms** are found: fever, lassitude, sore throat, cervical lymphadenitis, exudative pharyngotonsillitis, and hepatosplenomegaly, monocytosis with atypical lymphocytes and also icterus or exanthema. The infection usually proceeds mildly or subclinically when it is an early endemic infection in infancy. Severe courses of the disease are observed in immunosuppressed patients or in children with immune defects. In rare cases the infection takes a chronic course.

The main symptoms in **chronic EBV-infection** are recurrent fever, reactive adenopathy, hepatosplenomegaly, uveitis, pneumonia and polyneuropathy. The course of the disease is self-limiting and requires no virostatic treatment. An accompanying antibiotic treatment must be considered only in superinfected tonsillitis, whereby ampicillin and amoxicillin are contraindicated (exanthema, "rash"!!!). A primary infection in pregnancy is rare. A prenatal infection through reactivation of latent EBV infection has not been reported so far.

Rare complications:

Hematology: hemolytic anemia, granulocytopenia, aplastic anemia, thrombocytopenic purpura;

Neurology: meningoencephalitis, transversal myelitis, Guillain-Barré syndrome, neuritis nervi optici, polyradiculitis;

Heart: myocarditis, pericarditis;

Respiratory tract: larynx obstruction, streptococci pharyngitis, pneumonia, nasopharynx carcinoma;

Skin: ampicillin-rash, vasculitis, cold urticaria, hair cell leukoplakia;

Kidney: interstitial nephritis, glomerulonephritis;

Liver: hepatitis, liver necrosis;

Spleen: splenic rupture;

Eyes: keratitis, dacrocystitis, conjunctivitis;

Immunology: hypo/hypergammaglobulinemia, lymphoproliferative syndrome.

Further parameters: In the blood differential leukocytosis with 40-90% of mononuclear cells and activated lymphocytic forms, usually GOT, GPT, γ -GT increased. EBV antibodies can confirm mononucleosis by testing Viral-Capsid-Antigen-IgM (anti-VCA-IgM), Viral-Capsid-Antigen-IgG (anti-VCA-IgG), Early Antigen-IgG (anti-EA-IgG) and Epstein-Barr-Nuclear-Antigen-IgG (anti-EBNA-IgG).

The following tests are available:

- **EBV-Serology**

Material: 1 ml serum

Stability: 14 days at 2 to 8°C

TAT: 1 day, FML

Method: IFT

Units: Qualitative

Ref.- range: Negative

Note: The IFT includes: **VCA-IgG, VCA-IgM, EBNA and EA**

- **EBV-DNA**

Indication: Suspicion of acute infection or reactivation of chronic EBV infection

Material: 3 ml EDTA blood, throat smear (dry swab), sputum

TAT: 7-10 days*

Method: PCR

Ref.- range: negative

Note: In latent EBV infections, PCR amplification from throat smear or sputum can turn out positive without disease symptoms

For complete list of laboratory test offered at Freiburg Medical Laboratory, please visit <http://www.fml-dubai.com/parameter-listings/>