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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 chil-dren, 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 su-perinfected tonsillitis, whereby ampicillin and amoxycillin 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, thrombocytepenic purpura;

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

Heart: myocarditis, pericarditis;

Respiratory tract: larynx obstruction, streptococci pharyngitis, pneumonia, na-sopharynx carcinoma;

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

Kidney: interstitial nephritis, glomerulonephritis;

Liver: hepatitis, liver necrosis;

Spleen: splenic rupture;

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^ non-accredited parameter
*performed in a collaborating laboratory (Germany)

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/

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