



Parvovirus B19



Human Parvovirus B19 is the causative virus in erythema infectiosum (also known as „slapped cheek syndrome“ or the „fifth disease“) in children and causes aplastic crisis in anemic patients. The virus also contributes to joint diseases, embryopathies, and tissue rejection following renal transplants.

Parvovirus B19 occurs worldwide. The sera-prevalence of B19-specific antibodies in western developed countries is between 40 – 60 %. The transmission route is not known. Droplet infection or the fecal-oral route is suspected. Blood and blood products are infectious, so that multiple transfusion patients and drug addicts are high incidence groups.

Parvovirus B19 replaces in the bone marrow in erythrocyte precursor cell, which are destroyed in the process. In patients already suffering from anemia (sickle-cell anemia, chronic haemolytic anemia), such infection result in so-called aplastic crises in which the lack of erythrocyte resupply leads to a critical shortage. Histological huge pronormoblasts with nuclear inclusion bodies and cytoplasmatic vacuoles in the bone marrow are observed.

The incubation period takes 1-12 weeks. Without any uncharacteristic, early symptom an exanthema across the cheeks and sparing the nasolabial folds, forehead and mouth appears which changes in colour and form nearly every day. Also arthralgia (especially with women), pseudo appendicitis, enteritis and influenzalike symptoms may develop. Infections during the pregnancy lead to spontaneous abortions in early pregnancy and fetal damage (hydrops fetalis) in late pregnancy. Certain forms of arthritis are considered complications of parvovirus B19.

Species	Disease	Symptoms	Mechanism of infection
Parvovirus B19	Erythema infectiosum	Without any early symptom, sudden onset of exanthema on the face and extremities appears complications: aplastic crises, Hydrops fetalis	Spread by infected respiratory droplets

Infections may be diagnosed by:

PCR

Serology: Determination of specific antibodies based on the ELISA-technique

NovaLisa™ Parvovirus B19 IgG/IgM ELISA:

The NovaLisa™ Parvovirus B19 IgG/IgM ELISA is intended for the qualitative determination of IgG-/IgM- class antibodies against Parvovirus B19 in human serum or plasma (citrate).

