

Leishmania, Kala- Azar

General:

Leishmania infections occur mainly in endemic tropical areas or by blood transfusions. In visceral leishmaniasis (Kala-Azar.) Leishmania develops in the RES, the incubation period is from 10 days up to 1 year. Most cases are diagnosed after a holiday in fall or winter. Visceral leishmaniasis (VL) is caused by *L.infantum*, *L.donovani* and *L.chagasi* and cutaneous leishmaniasis (KL) by *L.major*, *L.tropica*, *L.mexicana*, or *L.infantum*. A special form of the cutaneous Leishmaniosis is the American Leishmaniasis with a tendency of spreading into the mucous membranes resulting in severe tissue damage.

Clinical symptoms of VL are fever, cough, diarrhea, loss of weight, hepatosplenomegalia and generalized swelling of lymph nodes. It requires fast diagnostics, since 80% to 90% of untreated patients die. The cutaneous leishmaniasis ("Oriental boil") presents with dry, slowly healing or ulcerous papules. In the further course erythematous granuloma with central necrosis occur, but heal with or without therapy within 3-5 (24) months. (DD: "Coral ulcer", mycosis, cutaneous tuberculosis, Larva migrans).

Pathological laboratory findings are: increased transaminases, increased ESR, monocytosis, lymphocytopenia, thrombocytopenia, macrocytic hypochromic anemia (anisocytosis, poikilocytosis, polychromasia), prolonged PTT, IgG and IgM rise.

Indication: Suspicion of leishmaniasis, lymphadenitis, hepatosplenomegalia

The following tests are available:

- **Leishmania antibody screening**

Indication: screening test for leishmaniasis, (for cutaneous form, better LeishmaniaPCR, see below), lymphadenitis, hepatosplenomegalia

Material: 1 ml serum

TAT: 7-10 days*

Method: HA

Units: Titer

Ref.- range: <1:4

- **Leishmania antibodies**

Indication: screening for *L. donnovani* and *L. infantum*

Material: 2 ml serum

TAT: 7-10 days*

Method: IFT

Units: Titer

Ref.- range: <1:20

- **Leishmania antibodies**

Indication: confirmation test for positive IFT

Material: 1 ml serum

TAT: 7-10 days*

Method: EIA

- **Leishmania DNA (PCR)**

Indication: Diagnosis of a cutaneous leishmaniasis

Material: 3 ml EDTA blood

TAT: 7-10 days*

Method: PCR

Units: qualitative

Ref.- range: negative

Note: missing antibody reaction in skin leishmaniasis! The higher sensitivity PCR is recommended. However, in systemic infection (Kala Azar) serological results are reliable

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