

# Echinococcus

## General:

*Echinococcus granulosus*: Synonym *Echinococcus cysticus*, cystic echinococcosis, dog tapeworm. Occurrence predominantly in the mediterranean area. Infection through oral admission of worm eggs, which are excreted by dogs. The larvae then predominantly develop in the liver with cystic formation, but also in the lung and brain of human beings. Clinical indications: pain in the upper abdomen, icterus, thorax pain, coughing with ejection, paralyses, loss of sight. If the serum levels persist during several months after surgical treatment, a reactivation must be assumed.

*Echinococcus multilocularis*: alveolar echinococcosis, small fox tapeworm. Oral admission of cysts in agricultural fields intermediate hosts (fox, dog, cat, rodents) or forest berries; most infections in late summer or autumn; incidence in Europe is 0.7/100000. Incubation period can last 10 years or even more. Clinical indications are usually uncharacteristic with upper abdominal pain with or without cholestasia, typical eosinophilia is rare, the transaminases are slightly increased. The liver is mostly infected with larvae. Due to its destructive power the alveolar echinococcosis is extremely dangerous, because it is discovered mostly too late. Surgical removal of the parasite is recommended.

Diagnosis through serological tests in combination with imaging. The serological indirect hemagglutination test (IHA) includes antibodies against *E. granulosus* and *E. multilocularis*, the ELISA tests predominantly antibodies against *E. multilocularis*. High titers against *E. multilocularis* can persist for several weeks after surgical treatment.

Indication: unclear icterus, clarification of sonographically diagnosed liver cyst, unclear hepatopathy

The following tests are available:

- **Echinococcus granulosus/multilocularis antibody screening**

Material: 1 ml serum

TAT: 7-10 days\*

Method: IHA, includes *E. granulosus* and *E. multilocularis*

Units: Titer

Ref.- range: <1:32

- **Echinococcus multilocularis antibodies**

Material: 1 ml serum

TAT: 7-10 days\*

Method: EIA, specific for E. multilocularis

Units: Qualitative

Ref.- range: <0.9

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