

Freiburg Medical Laboratory ME LLC, P.O.Box 3068, Dubai



# Cat scratch disease

**General:** Bartonella (formerly known as Rochalimaea) is a genus of Gram-negative bacteria. Facultative intracellular parasites, Bartonella species can infect healthy persons but are considered especially important as opportunistic pathogens. Bartonella are transmitted by insect vectors such as ticks, fleas, sand flies and mosquitoes. At least eight Bartonella species or subspecies are known to infect humans.*Bartonella henselae* is a proteobacterium that can cause bacteremia, endocarditis, bacillary angiomatosis, and peliosis hepatis. It is also the causative agent of cat-scratch disease (Bartonellosis, Reticulosis benigna, also caused by Afipia felis) which occurs after a cat bite or scratch.

**Cat-scratch disease**: starts with a papule on infected skin. About 2 weeks after the infection, one or more lymph nodes appear in the neck area or in the upper extremities for 2 weeks up to 2 years. Long lasting fever can be observed in 1/3 of all cases. Further symptoms are headache, loss of appetite, more rarely arthralgia or eye involvement with painless conjunctival granuloma, exanthema and splenomegaly. In uncomplicated cases sponta-neous healing is observed after 2-4 months. Systemic complications are rare and present with neurological symptoms 1-6 weeks after lymphadenopathy: encephalopathy, spasms, paraplegia, coma, neuroretinitis, radiculitis or polyneuritis. The symptoms usually last about two weeks and then disap-pear without residual damages.

**Therapy**: The typical cat scratch disease heals spontaneously in most cases; therefore an antibiotic therapy is not necessarily required. Antibiotics of the first choice are ciprofloxacin, cotrimoxazol, erythromycin, doxycyclin, minocyclin; resistant agent: gentamicin, other aminoglycoside, rifampicin. Diff. diagnosis: EBV, CMV, toxoplasmosis, Chlamydia trachomatis.

Peliosis hepatis: caused by *B. henselae* can occur alone or develop with cutaneous bacillary angiomatosis or bacteremia. Patients with peliosis hepatitis present with gastrointestinal symptoms, fever, chills, and an enlarged liver and spleen containing blood-filled cavities. This systemic disease is seen in patients infected with HIV and other immunocompromised individuals.

*Bartonella quintana*: also known as *Rochalimaea quintana*, is a microorganism that is transmitted by the human body louse and is the etiologic agent. The first clinical manifestation is attributed to Bartonella quintana, affected an estimated > 1 million people during World War I and was mentioned for the first time in 1915 as two types. The first was characterized by a sudden onset of headache, dizziness, pain in the shins, and elevated temperature (39-40°C). Between days 3 and 7, temperature would suddenly drop to normal or subnormal. Thereafter, temperature rose sharply before falling again. The second manifestation of the disease was characterized by a shorter initial period and frequent relapses.

Page 1 of 3



Updated 28/04/2024



Fax: 04 396 2228



Freiburg Medical Laboratory ME LLC, P.O.Box 3068, Dubai Tel: 04 396 2227

Bartonella species:

Species	Human reservoir or inci-dental host	Animal reservoir	Pathophysiology	Distribution
B. bacilliformis	Reservoir		Causes Carrion's disease (Oroya fever, Verruga peruana)	Peru, Ecuador, and Colombia
B. quintana	Reservoir		Causes Trench fever, Bacillary angiomatosis, and endocarditis	Worldwide
B. clarridgeiae	Incidental	Domestic cat	Cat-scratch Dis-ease	
B .elizabethae	Incidental	Rat	Endocarditis	
B. grahamii	Incidental	Mouse	Endocarditis and Neuroretinitis	
B. henselae	Incidental	Domestic cat	Cat-scratch Dis-ease, Bacillary angiomatosis, Peliosis hepatis, Endocarditis, Bacteremia with fever and Neuroretinitis	Worldwide
B. koehlerae	Incidental	Domestic cat		
B. vinsonii	Incidental	Mouse, Dog		
B. washoensis	Incidental	Squirrel	Myocarditis	
B. rochalimae	Incidental	Unknown	Carrion´s disease like symptoms	

The following tests are available:

#### Bartonella henselae IgG antibodies

Page 2 of 3



Updated 28/04/2024

Freiburg Medical Laboratory ME LLC is accredited according to DIN EN ISO 15189.

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





Freiburg Medical Laboratory ME LLC, P.O.Box 3068, Dubai Tel: 04

Tel: 04 396 2227 Fax: 04 396 2228

Material: 1 ml serum TAT: 7-10 days\* Method: IFT

Units: Titer

Ref.- range: <1:64

# • Bartonella henselae IgM antibodies

Material: 1 ml serum

TAT: 7-10 days\*

Method: IFT

Units: Titer

Ref.- range: <1:20

## • Bartonella henselae DNA, PCR

Material: 1 ml lymph node biopsy, tissue, aspirate (no serum!)

TAT: 7-10 days\*

Method: PCR

Ref.- range: see report

### Bartonella quintana IgG antibodies

Material: 1 ml serum

TAT: 7-10 days\*

Method: IFT

Units: Titer

Ref.- range: <1:64

### • Bartonella henselae IgM antibodies

Material: 1 ml serum

TAT: 7-10 days\*

Method: IFT

Units: Titer

Ref.- range: <1:20

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

Page 3 of 3



Freiburg Medical Laboratory ME LLC is accredited according to DIN EN ISO 15189.

Updated 28/04/2024