**Bartonella**

Bartonella are highly fastidious, slow growing, gram negative bacteria. They have ability to invade mammalian cell and RBC.

It has several types:

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| Bartonella | Diseases | Reservoir | Transmission |
| B. henselae | * Cat scratch disease
* Bacteremia
* Endocarditis
* Bacillary peliosis
* Bacillary angiomatosis
 | Cats and felines | Exposure to cat & cat flies |
| B. quintana | * Trench fever
* Bacteremia
* Endocarditis
* Bacillary angiomatosis
 | Humans | Louse |
| B. bacilliformis | * Bartonellosis
* Oroya fever
* Verruga peruana
 | Humans | Sandfly |

**B. henselae**

Transimitted by cat scratch or bite.

Cat flies (Ctenocephalides felis) and cat to cat transmission also occur.

Cat starch disease-it has two clinical forms:

* Atypical CSD- Extranodal manifestation as hepatitis, retinitis & splenitis.



* Typical CSD- most common form. Subacute regional lymphadenopathy and painless erythematous papule develops at site of cat scratch.

Bacillary angiomatosis- angioproliferative disorder as nonvascular lesion involving skin and other organ. Associated with HIV & immunocompromised condition. Caused by both B. quintana (subcutaneous lesion) & B. henselae (hepatosplenic lesion)

Bacillary peliosis- angioproliferative disorder involving liver,spleen /7 lymph nodes

Bacteremia & Endocarditis

**B. quintana**

It is transmitted to humans by louse feces (autoinoculated into skin due to scratching). It causes Trench fever, chronic bacteremia, endocarditis & bacillary angiomatosis.

Trench fever

Trench fever/quintan fever has two forms:

 1. Classical trench fever (5 days fever)

 2. Re-emerged trench fever

**B. bacilliformis**

Transmitted by sandfly (Lutzomyia). Humans are only reservoir.it has two forms:

Oroya fever/Carrion’s disease- bacteremic, systemic illness with or without anemia.

Varruga peruana- cutaneous vascular lesion

**Laboratory diagnosis**

1.Specimen- blood, lymph node, skin biopsies

2.Microscopy- Imunofluorescence staining and Warthin-Starry silver nitrate staining

3.Culture- blood agar with 5% CO2 at 37°C (30°C for B. bacilliformis) incubated for 12-15 days (max 45 days).

4.Serological diagnosis

Antibody detection

* IFA
* EIA

5.Molecular diagnosis

* PCR

**Treatment**

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| Bartonellosis | Antiobiotics |
| Typical cat scratch disease | Azithromycin |
| Atypical cat scratch disease | Doxycycline |
| Trench fever, Endocarditis | Gentamycin |
| Bacillary angiomatosis & Bacillary peliosis  | Erythromycin |
| Oroya fever | Chloramphenicol |
| Verruga peruana | Rifampin |