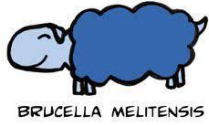


Low-grade implant infection with *Brucella melitensis*

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In Switzerland Brucellosis is a rare zoonotic infection that may present with atypical symptoms, delaying diagnosis and treatment. Brucellosis is endemic in many parts of the world including the Mediterranean Basin.

The most common mode of transmission is the consumption of unpasteurized dairy products. A detailed patient history including a travel history is a crucial part in clinical routine.



Case Report:

A 65-years-old patient originating from Turkey presented with pain in the left knee and lower limb for the past 4 months. The patient had a history of a car accident 20 years ago with a fracture of the proximal tibia requiring internal fixation and the implant still in situ. The clinical examination only showed a slight pain over the scar on the proximal lateral tibia. In the laboratory analysis CRP (32 mg/l) was slightly increased.



A haematogenous low-grade implant-related infection was suspected. In a Single-Photon Emission Computed Tomography (SPECT/CT) a focal accumulation was detected at the tibial implant. Blood cultures drawn initially to detect an endocarditis lenta showed the growth of *Brucella melitensis*.

The implant was removed after two weeks of antibiotic treatment. In the sonication of the implant specific polymerase chain reaction (PCR) -analysis for *Brucella melitensis* was positive. In a detailed anamnesis, the patient reported consumption of unpasteurized milk during her last travel to Turkey, 1 months prior to the symptoms onset and 5 months prior to diagnosis.

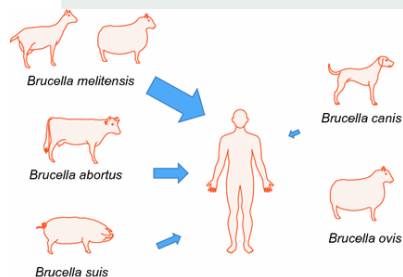


Knee a.p. and SPECT-CT: significantly increased metabolic activity suspicious of infection

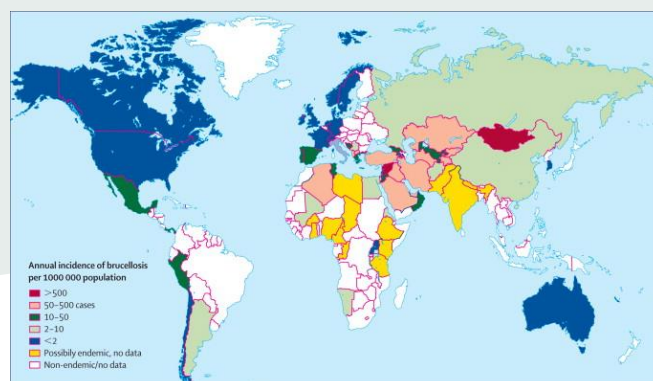
Conclusion:

The presented case is representative for the **classical features of brucellosis** associated with a rare but relevant complication. The incubation time ranges from 5 to 60 days. Most (90%) infections are asymptomatic. Symptoms include undulating fever, malaise, headache and fatigue. The infection may spread to the liver, spleen or bone. Cardiac involvement is rare. In the presented case with persistent bacteraemia, it remains speculative, if the initial asymptomatic infection lead to a localised symptomatic presentation and secondary endocarditis or vice versa.

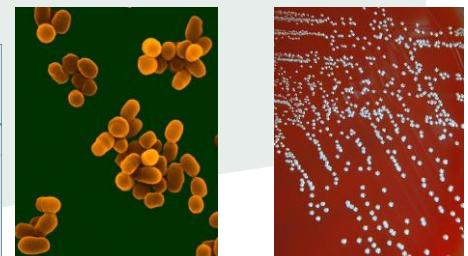
Brucellosis is considered a biological hazard and precaution measurements should be put in place.



Brucella transmission to humans



Global map of human brucellosis



Brucella: scanning electron micrograph (SEM) and on Agar