Brucellosis

Definition of causal agent

Brucellosis is a zoonosis usually caused, in descending order of virulence, by the coccobacilli *Brucella melitensis, Brucella suis* or *Brucella abortus*. The organism grows slowly and is resistant to drying but sensitive to acid and heating. Infection may be acute, subacute, chronic or clinically unapparent. Infective animals may or may not show signs of the disease.

1. Transmission of infection

2.1. Exposure

Infection is most common in males aged 10 to 40 years. The natural reservoirs for the organism are goats, sheep, camels *(B. melitensis),* pigs *(B. suis)* and cattle *(B. abortus)*. Dogs, horses and rabbits can also become infected. Infection occurs in humans due to drinking infected milk, tending infected animals or handling infected carcasses, in which case the organism may enter the body through cuts and abrasions.

2.2. Occupational groups at risk

This is a disease mainly of farmers, abattoir workers, butchers, meat packers, agricultural engineers, and laboratory technicians. Among veterinary surgeons, accidental inoculation or conjunctival contamination with brucella vaccine is an additional risk.

3. Clinical disease

3.1 Presenting features

The incubation period varies from several days to several months. The early symptoms of clinical disease are non-specific: fevers (sometimes episodic), chills, night sweats, aches and pain, anorexia and lethargy. Hepatosplenomegaly and lymphadenopathy occur in a minority of cases.

3.2 Laboratory diagnosis

(i) Isolation of the organism is difficult.
(ii) Serological tests for specific IgM or IgG antibodies.

3.3 Prognosis

The disease is self-limiting in 90% of cases. Serious or prolonged effects on the joints, heart or nervous system occur in 10% of infections.

Exposure criteria:

Acute infections:

Minimum intensity and duration of exposure: not applicable

Maximum latent period: one week

Chronic infections:

Minimum intensity and duration of exposure: not applicable

Maximum latent period before symptoms appear is difficult to determine and requires specialist medical advice.