

BRUCELLOSIS

BANG'S DISEASE

The Organism

- *Brucella* is a genus of Gram negative bacteria
- named after David Bruce (1855-1931).
- facultatively intracellular coccobacilli
- They are small
- Non encapsulated
- flagellated

Epidemiology

- *Brucella abortus* cause of abortion in cattle
- Sexually mature animals susceptible; outbreaks occur in first-calf heifers, older cows infected but do not abort.
- Transmitted directly from infected animal to susceptible animal by uterine discharges and Congenital infection occurs and Infection introduced into herd by unknown infected carrier animal .
- Natural infection and vaccination result in immunity to abortion but not infection, and infected animals remain serologically positive for a long time

Clinical Signs

- Abortion epidemics in first-calf unvaccinated heifers after fifth month of pregnancy.
- Subsequent pregnancies carried to term.
- Orchitis and epididymitis in bulls.
- Synovitis (hygromas) occurs.
- Fistulous withers in horses

Epidemiology

- *Brucella avis* cause Disease of sheep. Organism carried by sexually mature rams with spread by direct contact or passive venereal infection
- *Brucella melitensis* cause Disease of goats, sheep, humans, and occasionally cattle.
- Transmission congenital or by ingestion or contact with infected placenta, vaginal discharge, or milk

Clinical Signs

- Infertility in rams due to epididymitis.
- Abortion in ewes and neonatal mortality in lambs are also occasionally caused by the infection
- Abortion storms, abortions often in last 2 months of pregnancy.
- Weak-born lambs.

Post Mortem Lesions

- There are no lesions that are characteristic of brucellosis.
- The causative organism can often be isolated from all tissues but the spleen, lymph nodes, and udder are the most common sites for attempted isolation in chronic infection.

Clinical Diagnosis

- Case history
- Clinical sign
- P.M sign

Differential Diagnosis

- Trichomonosis
- Neosporosis
- Vibriosis
- Leptospirosis
- Listeriosis
- OEA

Laboratory Diagnosis

- blood culture after the infection or from the aborted fetus, vaginal mucus, or milk,
- staining smears from the placenta and fetus may give a tentative diagnosis
- milk ring test, CFTs, ELISA rose Bengal
- intradermal allergic test using 50 mg of brucellin INRA used for diagnosis.
- neck or caudal fold and lower eyelid.
- Reactions are read in 48 hours

TREATMENT

- unlikely to be undertaken in animals and is also unlikely to be economically or therapeutically effective.
- daily intraperitoneal administration of 500 mg and 1000 mg of tetracycline to naturally infected animal for a period of 6 weeks.
- A dose of 1000 mg of long-acting tetracycline given every 3 days for a period of 6 weeks achieved a cure rate of 75% .

Prevention and Control

- Control measures must include hygiene at kidding or lambing and the disposal of infected or reactor animals.
- Separate pens for kidding does that can be cleaned and disinfected, early weaning of kids from their does and their environment, and vaccination are recommended.
- In endemic areas all placentas and dead fetuses should be buried as a routine practice.