

BRUCELLOSIS A ZOONOTIC DISEASE

A world wide re-emerging infectious disease

Brucellosis is widely prevalent in India among bovine population both in farms and in the villages

CAUSE

Species		Host
B.Melitensis	Goats and sheep	In humans all these four species are infectious
B.abortus	cattle	
B.canis	dogs	
B.suis	pigs	

ECONOMIC IMPORTANCE IN ANIMALS

- Abortion
- Delayed conception
- Temporary or permanent infertility
- Inbreeding
- Weak offspring
- Reduced milk production

PUBLIC HEALTH IMPORTANCE

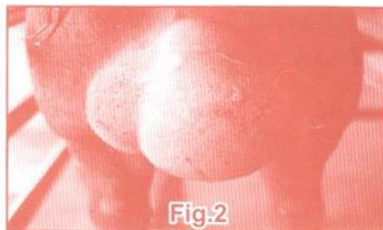
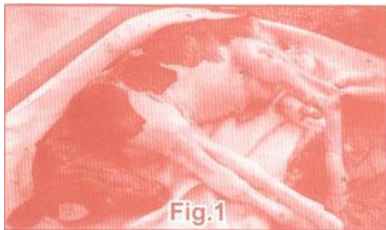
- Abattoir workers
- Veterinarians
- Livestock producers
- Laboratory personnel

MODE OF TRANSMISSION

- Direct contact of infected animals
- Ingestion
- Inhalation of airborne bacteria
- Consumption of fresh milk and dairy products prepared from unpasteurized milk such as soft cheese, yoghurts and ice creams
- Infection may also occur through cuts and abrasions of the skin with the conjunctiva
- In utero
- In contrast to artificial insemination, bulls used in natural service may fail to spread the infection as the infected semen is not deposited in the uterus

CLINICAL SIGNS

- Loss of appetite
- Reduced milk production



- Infertility
- Abortion in the last trimester of pregnancy
- Orchitis
- Epididymitis
- Hygromas

CHARACTERISTICS LESIONS

- Firm or soft white nodules on uterine mucosa
- Plaques on the placental mucosa
- Nodules in other tissues and joints

SAMPLE COLLECTION

Live animals	Dead animals
<ul style="list-style-type: none">• Blood• Serum• Milk Abortion cases: <ul style="list-style-type: none">• Vaginal smear and vaginal swab Placenta: <ul style="list-style-type: none">• Impression smear from placenta	Foetus: <ul style="list-style-type: none">• Smears from abdominal fluid• Thoracic fluid• Foetal stomach content• Lung• Liver• Spleen• Cotyledons• Abdominal fluid and thoracic fluid• Tissues in 10% formalin

PREVENTION AND CONTROL

- Avoid unpasteurized dairy products
- Wear protective clothing/ barriers while handling still births/products of conception
- Awareness among farmers and public through mass contact programme
- Mandatory testing of all breeding bulls in artificial insemination centres
- Control of brucellosis in female calves at three months vaccination with B.abortus S19 vaccine and B.melitensis Rev1 strain for sheep and goats
- Treating with oxytetracycline @ 5mg/kg bwt i/v in combination with Streptomycin 11mg/kg bwt i/m route /day for 5 consecutive days

SAMPLE/ TESTING FEES

S.NO	Diagnostic tests	sample	Cost/sample
1.	Rose Bengal plate agglutination test	Serum	Rs 50/-
2.	Microscopical examination of smears for bacteria	Blood smear	Rs 20/- slide
3.	Isolation & identification of bacteria	Swab and organs	Rs 250/- sample