

BRUCELOSIS

- * 1. Synonyms
- * In animals- Bang's disease , Contagious abortion, Epizootic abortion
 - *In humans- Malta fever(Brucella melitensis)& Undulant fever(Brucella abortus)

TYPE OF ZOONOSIS

- * Direct anthroozoonosis
- * Occupational zoonosis

DEFINITION

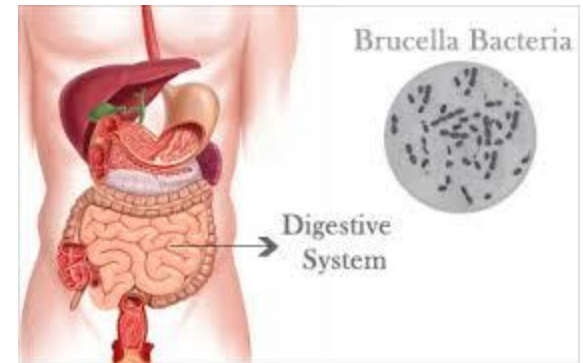
- * Infectious disease in humans, acute & chronic brucellosis & characterized by profuse sweating ,chills & insomnia arthralgia.
- * Contagious disease of domestic animals that causes placentitis & abortion at last trimester of pregnancy.

HISTORY

- * Discovery of *Brucella melitensis* by 'Bruce' in 1887.
- * 'Bernard bang' isolated *Brucella abortus*.

ETIOLOGY

- * Cattle- *Brucella abortus*
- * Goat- *Brucella melitensis*
- * Gram –ve, non-motile
- * Facultative intracellular pathogen
- * Aerobic coccobacilli



RESERVIOR & INCIDENCE

- Prevalent in all countries of the world.
- Human brucellosis due to contact with aborting bitches.
- Natural reservoirs are cattle , goats & swine.
- Each year about a half million cases of brucellosis occur around the world.

SOURCE OF INFECTION

- * Faeces of infected animals
- * Uterine & vaginal discharges
- * Placental & foetal membranes
- * Contaminated environment, water, feed, utensils.

TRANSMISSION

- * In humans-
 - Drinking of infected raw milk
 - Handling of aborted foetus, fluids & foetal membranes.
 - Stockyard workers, slaughter house workers.
 - Through skin abrasions and conjunctiva.
- In animals-
 - Through flies, ticks, rats
 - contaminated food
 - Semen from infected bulls.

DISEASE IN ANIMALS

- * Incubation period is 1 to 3 weeks
- * Abortion
- * Infertility, testicular abnormalities
- * Poor semen quality
- * mastitis

DISEASE IN MAN

- Incubation period from 1 to 3 weeks
- Septicemic disease
- Acute brucellosis- chills, nausea, anorexia, sexual impotence & orchitis in male.
 - *Neurological symptoms- Irritation, nervousness and depression.

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DIAGNOSIS

- In human beings
 - Based on history clinical signs
 - Increased ESR
 - Rose Bengal plate agglutination test
 - To detect the IgG antibody [IgM antibody present in the earlier stage of the infection.

SEROLOGICAL TESTS FOR ANIMALS

- SAT
- CFT
- ELISA
- * Rose Bengal plate agglutination test
- * Polymerase chain reaction
- * Culture of blood, foetal tissues

TREATMENT

- Antibiotic like tetracycline
- Chloramphenicol
- Streptomycine
- Gentamicine
- “Calfhood vaccination”- 4to8 months for S19; 4to12 months for RB51.
- S19 vaccine will induce brucellosis in human

PREVENTION & CONTROL

- * Screening the herds
- *Hygiene disposal of aborted uterine discharges, foetus
- * Vaccination of all calves between 4to8 month of age with strain-19 vaccine[dose is 5ml in s/c route].

IMPORTANT POINT FOR BRUCELLOSIS

- Media use for Brucella- Skirrow media
- Mainly brucella found & grow in reproductive organ because here erythritol secret { In female from placenta & in male from epididymis}.