BOVINE TUBERCULOSIS: A NEGLECTED ZOONOTIC DISEASE

What is Bovine Tuberculosis?

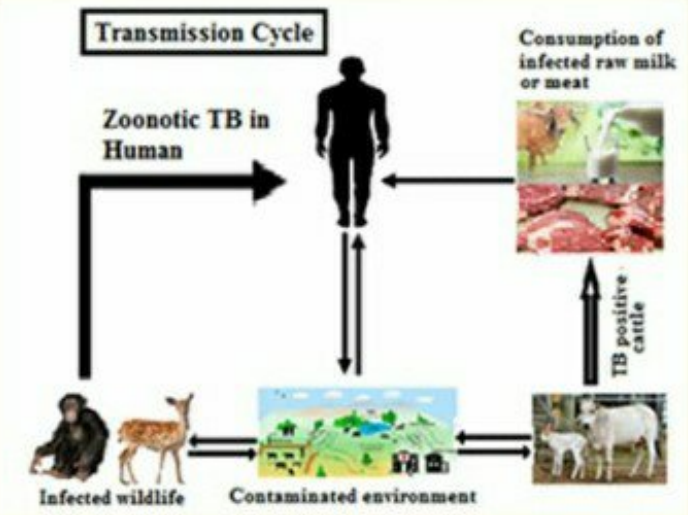
Bovine tuberculosis (BTB) is a chronic bacterial disease of animals caused by *Mycobacterium bovis*, a member of *Mycobacterium tuberculosis* complex (MTBC) which is closely related to the bacteria that cause human and avian tuberculosis.The disease causes great socio-economic impact on livestock sector, specially in developing countries.

Which animals are mainly affected?

Cattle serves as the main source of infection for humans and the disease can also be circulated in other domesti-cated,pet and wildlife species.

How BTB is transmitted?

1. Direct contact with infected domestic and wild animals
2. Indirectly from contaminated environment.
3. Humans can be infected with zoonotic tuberculosis via direct contact with infected animals, airborne transmission or by consuming contaminated raw milk or meat.



What are the clinical signs and symptoms in cattle?

- The clinical symptoms may be sub acute or chronic, with a variable rate of progression.
- Intermittent hacking cough, pneumonia, weight loss and eventual death are the major signs.
- Besides these, the disease causes a general state of illness like loss of appetite, fluctuating fever, diarrhea, reduced milk yield, dyspnea, swelling of lymph nodes etc.
- The bacteria can also lie dormant in the host without causing disease for a long periods.

What are the clinical signs and symptoms in cattle?

What kind of lesions can be observed in post mortem examination?

• Characteristic of tuberculous lesions (central round, oval, or irregular, often assimilating foci of caseous necrosis and mineralization (calcification) in the lungs has been observed.

Fig: Tuberculous nodule and caseotic necrosis in infected cattle

How bovine tuberculosis can be diagnosed?

1. Single intradermal comparative cervical tuberculin (SICCT) test
2. Z-N staining (Acid fast organism)
3. Culture/Isolation of Mycobacteria
4. Serological test /Gama-interferon assay
5. Molecular detection (PCR)


Fig: Comparative Tuberculin Test

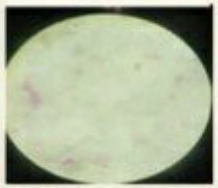


Fig: Acid fast organism

Prevention and control measures of bovine tuberculosis

1. Implementing the Test and slaughter policy in the farms.
2. Routine tracing of tuberculosis animals and slaughter house surveillance.
3. Consumption of pasteurized milk and properly cooked meat.
4. Bringing awareness and training programmes among the people about the zoonotic tuberculosis.
5. Timely sharing of data between human health and animal health sectors.
6. Sanitary inspection of carcasses at abattoirs, animals at farm level and on husbandry practices should be done routinely.

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