



Zoonotic Diseases

ZOONOTIC DISEASES

ZOONOSES

- An infection or infections disease transmissible under natural conditions from vertebrate animals to man.
- Zoonotic diseases are infectious diseases that can be transmitted between animals and humans. These diseases can be caused by bacteria, viruses, parasites, and fungi.

Transmission:

- Zoonotic diseases can be transmitted through various routes, including direct contact with animals, consumption of contaminated food or water, inhalation of airborne particles, and exposure to vectors (like ticks or mosquitoes) that carry disease agents from animals to humans.
- **Reservoir Hosts**
- Animals that carry and transmit the disease agents without getting sick themselves are known as reservoir hosts. Reservoir hosts can include wild animals, domestic animals, and even pets.

- **Diagnosis**
 - **Laboratory testing:** Laboratory tests are essential for confirming the presence of a disease agent. Various methods can be used:
 - **Molecular tests:** Polymerase Chain Reaction (PCR) and other molecular techniques can detect the genetic material (DNA or RNA) of pathogens. This is particularly useful for identifying specific pathogens in samples.
 - **Serological tests:** Serology can identify antibodies against specific pathogens. It helps determine exposure history but may not always indicate active infection.
 - **Culturing:** Some pathogens can be grown in culture, which allows for further study and characterization. However, culturing can be time- consuming and may not be possible for all pathogens.

Preventive and Control Measures

- Hand clean after being around animals even didn't touch animals
- Prevent mosquitoes and tick bites and fleas
- Use safe food handling techniques
- Avoid bites and scratches from animals
- Proper waste removal
- Use safe, clean drinking water

RABIES

- A deadly virus spread from the saliva of infected animals. It is usually transmitted through an animal bite. This disease attacks the nervous system. It is a fatal but preventable viral disease. It can spread to people and pets if they are bitten or scratched by a rabid animal. If a person does not receive the appropriate medical care after a potential rabies exposure the virus can cause disease in the brain which results in death of Individual.

- **Causative agent:**
 - Lyssavirus type 1 that belongs to rhabdoviridae family causes rabies. Virus is excreted in the saliva of the infected animal. Virus may appear 3-4 days before the onset of clinical symptoms and remains until death.
- ***Host Factors***
 - Warm blooded animals including men
 - Dog handlers
 - Veterinarians
 - Hunters
 - Below age of 1-24 years

- **Environmental Factors**

- Living with Unimmunized pets
- Many street dogs openly in surroundings.
- Rabid dogs and cats those have the virus in saliva

- **Transmission**

- Through Saliva from bite but can also be transmitted through saliva entering through cut in skin or when saliva comes in contact with eyes and nose or mouth.

- **Symptoms**

- Firstly, flu like symptoms and may last for days, e.g., fever, headache, vomiting, Nausea, Agitation, Anxiety, Confusion, Hyperactivity, Difficulty Swallowing, excessive salivation fear brought on by attempts to drink fluid because of difficulty in swallowing water, Hallucinations, insomnia, partial Paralysis.

- **Treatments**
- *First Aid after Day Bite*
- Cleaning of the Wound and scratches with running tap water along with soap at least 5 minutes.
- Now apply alcohol/tincture iodine/povidone-iodine to inactivate the left over Virus after washing.
- If required suturing of Wound can be done after 24-48 hours by applying antirabies serum locally.
- Observe the animal for 10 days. If animal develops the symptoms of rabies, then it should be killed.

Medications

- Diazepam
- Midazolam
- Haloperidol + Diphenhydramine.

THANK YOU