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An Overview of Tick Fever in Dogs

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ABSTRACT

Tick fever is a disease in dogs caused by both bacterial and viral agents vectored by ticks. It affects areas of the United States and South Africa. Tick fever can be transmitted to humans as well. This disease passes from one to next generation of ticks through eggs. Complement fixation test (CFT), the Indirect Fluorescent Antibody Test (IFAT), and Enzyme linked Immunosorbent Assay (ELISA) and Polymerase Chain Reaction (PCR) techniques are used for the diagnosis of tick fever. It can be controlled by overcoming the tick population using acaricides. Efforts are being made to develop anti-tick vaccines.

Introduction:

Tick borne disease have a wide impact on lives of both humans and animals. They are ectoparasites and suck blood for their survival. During blood sucking process they transmit a lot of pathogens into the blood of their hosts including protozoan, rickettsial, and viral agents (1). It not only affects dogs in the tropical and semi-tropical regions but also in temperate and urban climates. In sub-clinical cases, dogs are a source of disease (like *Ehrlchia ewingi, Rickettsia conorii,* etc.) to humans. The movement of dogs and other affected species (like humans) are a source to increase tick range into populated areas (2).

Epidemiology

Tick fever not only affects dogs in the tropical and semi-tropical regions but also in temperate and urban climates of the globe [2]. Tick fever has consistently existed in South Africa's environment. It was recently discovered that there are two different etiological pathogens having unique epidemiology and signs and symptoms. On the one hand ticks transmit *Ehrlchia ewingi* and *Rickettsia conorii* while on the other hand, However, *Rickettsia africae* is a cause of distinct disease called as African Tick fever. Although, it was known many years ago that this disease can spread widely and cause milder disease, having less visible spots on body and less chances to become severe (3).

Transmission

Tick fever is generally caused by tick .it is mostly transmitted by different pathogens like bacteria and viruses. This disease is transmitted when infected tick bites a host may be a dog or a cat etc. It transmits the bacteria and pathogens into the blood of host. Lyme disease is most common disease transmitted by ticks. By preventive measures we can control and overcome on this disease (3, 8).

Diagnosis

We can diagnose tick fever in dogs by following these measures or methods. Clinical signs and history, physical examination, Blood test, Complete blood count, Urine analysis and Imaging studies. (4, 7).

Mostly symptoms are lethargy, fever, loss of appetite and swollen lymph nodes. Serological test like are preferred for the diagnosis of tick fever in dogs. CBC is also done in its diagnosis if indicates than there are abnormalities found in blood which is the indication of tick fever. In some case urine analysis is also performed for the conformation in diagnosis. Complement fixation test (CFT) and polymerase chain reaction (PCR)is used for conformation.

Treatment

We can treat tick fever by using different medication and techniques. The medication includes different antibiotics and in preventive measures we can do control ticks by supportive therapy(acaricides) (5, 6).

In the antibiotics we may prefer Doxycycline, Tetracycline etc. These broad-spectrum antibiotics are very effective against pathogens cause tick fever. In severe cases hospitalization is preferred. For better recovery from this disease, we may use some supportive therapies like we may use things that help to control the fever and lower the body temperature which also help to relief the pain.

Conclusion

Many reasons are involved in the transmission or pathogenesis and these reasons may include viral, bacterial, parasitic agents. There emergence is most common in dogs so proper preventions and care must be needed to avoid tick fever, Proper treatment helps for better recovery otherwise this disease may cause hectic problems and sometime death of animal.

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