

Herpes sp. virus in rabbits

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Herpes viruses are common in animals as well as humans, affecting mainly the respiratory tract and genital organs. They can exist in subclinical form for long periods, while the bearer remains asymptomatic. Stress can activate the dormant virus, and cause an outbreak in the infected rabbit.

There are two *Herpes* viruses which are specific to Lagomorphs, and which have been observed in domesticated rabbits:

- *Herpesvirus sylvilagus* or *Hinze Herpesvirus Lymphoma*
- *Herpesvirus cuniculi*

Other varieties of the herpes virus, e.g. *Herpes simplex*, can be passed from humans to rabbits, and will compromise the rabbit's health. Rabbits however rarely infect humans with the *Herpes* virus, which mainly affects their internal organs, with the notable exception of *Herpes* sp. induced keratitis (inflammation of the cornea of the eye).

Rabbits infected by the virus cannot be cured of it, and so far, no successful treatment has been reported.

Herpes sylvilagus

This virus is Lagomorph specific. It is transmitted via fecal matter, urine, the doe's milk, mating, and even through

the air. It is not spread by insects. *Herpes sylvilagus* infects mainly the tonsils (a pair of lymphoid tissue masses lying on either side of the throat). The newly formed viruses are released in the throat cavity.

Clinical Signs

Common clinical signs include neurological disorders such as restlessness, circling, seizures, and coma. The development of interstitial pneumonia (chronic lung disease affecting the tissues between the cells of the lungs) has additionally been observed in cottontails.

Increased numbers of lymphocytes (lymphocytosis) in the blood, accompanied by rapidly reproducing lymphoid tissue lesions, will develop in lymph nodes as well as in other organs (kidneys, liver, lungs and heart). Experiments in rabbits inoculated with this virus have shown that tumors can form which are either benign (lymphoid tissue hyperplasia) or malignant (lymphoma, lymphosarcoma).

Further clinical signs are an increased level of leukocytes - white blood cells (leukocytosis), and an enlarged spleen (splenomegaly)



Diagnosis

Diagnosis is difficult in living animals. The virus can be found in the mouth,

Herpesvirus cuniculi

This virus has been isolated in colonies of wild rabbits, and in individuals in a colony of New-Zealand rabbits. Older males which have become resistant to the virus are thought to be potential carriers, contributing to its spread.

Clinical Signs

H. cuniculi causes fever and rashes, with the appearance of small blisters on the skin. Histological studies have shown mononuclear infiltrates and intranuclear inclusions in the testes, skin, and cornea.

Herpesvirus of unknown origin

An additional, as of yet unidentified, herpes-like virus has been observed to fatally infect rabbits, causing pneumonia, hemorrhagic dermatitis,

lymphocytes (white blood cells that fight infection and disease) and kidneys of the rabbit.

and necrotizing inflammation of the spleen.

Herpes simplex

There have been reports of naturally occurring cases of Herpes simplex in domestic rabbits.

Diagnosis is difficult in living animals, and is based on clinical signs and exposure to humans. Afflicted animals have developed non-suppurative meningo-encephalitis accompanied by neuron degeneration, but have not shown exterior macroscopic lesions.

Necropsy and tissue analysis have indicated internal damage in the temporal and parietal lobes of the brain cortex. The presence of the virus in the affected tissues has been detected through electronic microscopy.

Further Information

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