

Epizootic Hemorrhagic Disease (EHD)

Causative agent

The Epizootic Haemorrhagic Disease Virus (EHDV) is a representative of the genus *Orbivirus* in the family *Reoviridae*. Eight EHDV serotypes have been defined so far on the basis of neutralisation tests. Despite the high relatedness, molecular genetic and serological differentiation from Bluetongue virus (BTV) is possible.

Susceptible species

The disease occurs particularly in white-tailed deer in North America and also causes clear clinical manifestations there. However, cattle can also become clinically ill; goats and sheep cannot be infected at all or only with great difficulty.

Distribution area

North and South America, Australia, Asia and Africa (including Mediterranean countries such as Israel, Turkey, Morocco and Tunisia). In addition, the first outbreaks of EHDV in the EU were detected in Italy and Spain in November 2022 (EHDV-8).

Transmission

As for BTV, vectors are various species of biting midges (*Culicoides* spp.). These vary depending on the continent and region.

Clinical picture

The course of the disease is similar to that of bluetongue, with the difference that white-tailed deer show the highest susceptibility and mortality is highest in these animals as well. However, cattle can also fall ill. The clinical symptoms are indistinguishable from those of BTV infections (including fever, lassitude, bleeding, oedema, respiratory problems, lameness).

Diagnostics

The most suitable test material is EDTA blood, as this test material can be used for antibody detection by ELISA as well as real-time RT-PCR. The EDTA blood should be sent in a refrigerated state.

Post-mortem, spleen and lymph nodes are the organs of choice for virus isolation and direct pathogen detection. Here, too, the blood should be sent at +4 °C.

For further information see (in German language only):

[Official Collection of Methods of FLI](#)

Similar clinical pictures

EHD is an important differential diagnosis to bluetongue, especially in cervids. In cattle, in addition to bluetongue, bovine viral diarrhoea (BVD), foot-and-mouth disease (FMD) and malignant catarrhal fever (BKF) are also of differential diagnostic importance.

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Control

EHD is a notifiable animal disease. Control is based on the prevention of introduction and early detection of the disease. A specific therapy does not exist and therefore the animals can only be treated symptomatically. Live attenuated vaccines exist, but they are currently not licensed in the EU.

For further information see:

[German National Reference Laboratory for Epizootic Hemorrhagic Disease](#)

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