

A CODE OF PRACTICE FOR EQUINE INFECTIOUS ANAEMIA

This Code of Practice provides background information on Equine Infectious Anaemia (EIA) and the consequences of infection. It also provides advice to those in the industry on precautionary measures that should be taken to minimise the risk of possible infection.

1. Cause

EIA or swamp fever is a viral disease of horses, mules and donkeys caused by infection with equine infectious anaemia virus (EIAV), a type of lentivirus. The virus has a global distribution being regularly reported in the Americas, Africa, Asia, Europe and Australia. An unusual feature of EIAV infection is that surviving animals remain infected for life and can act as a potential source of infection for other animals. There is no cure or vaccine available to prevent infection by EIAV. EIA does not cause disease in humans.

2. Disease

Incubation period

The incubation period (period from infection to first development of clinical signs) is typically between 1 to 3 weeks although may be as short as 3 days or as long as 3 months.

Clinical presentations

EIA has acute, chronic and subclinical presentations. The acute disease is typified by a high fever (40-42 C), associated depression and inappetance, bloody diarrhoea, pinpoint haemorrhages of conjunctiva and mucous membranes, skin swelling, pallor due to anaemia, jaundice, increased heart rate and death in severe cases. Infection in pregnant mares may result in abortion, stillbirth or birth of a weak foal. Acutely infected horses carry high levels of virus in the blood and are infectious to other animals. In surviving animals there are recurring bouts of fever and anaemia, which are also associated with increased infectivity. In the chronic form of the disease there are recurring bouts of fever, depression, anaemia, weight loss and weakness. Subclinically infected horses may not demonstrate any clinical signs.

3. Transmission

EIAV is transmitted from infected to uninfected horses through transfer of infected blood or blood products. This may occur via insect vectors such as biting flies (including horse and stable flies) and mosquitoes, transplacentally from infected mares to their unborn/newborn foals or through use of contaminated medical instruments, administration of infected blood products and the use of unauthorised veterinary medicinal products. Infection between mare and foal may also occur through infected colostrums or milk or through fly bites. Inhalation of aerosolised infected material has recently been suggested as a potential mode of transmission in special circumstances. Clinically affected and recovered horses and even those with subclinical infection are all able to act as the source of infection for other horses. Infected horses are most infectious to other horses at the time of febrile episodes when their viral load is highest.

4. Laboratory Diagnosis

Detectable antibodies usually develop 7-14 days after infection and last for life. However, in some cases it may take some time for detectable antibodies to develop and therefore repeat testing for up to 3 months after possible exposure is recommended. The standard test used to identify these antibodies is the Agar Gel Immunodiffusion Test (AGID) or Coggin's Test. This test is the only one recognised by the Office International des Epizooties (OIE) for international trade though another test, the ELISA, is listed as an "alternative" test. The latter test is much quicker to perform than the AGIDT but all positive ELISA tests must be confirmed by the Coggin's Test.

5. Treatment

There is currently no cure available to treat infection by EIAV. Symptomatic and supportive treatment for the fever, anaemia and weight loss may be given on welfare grounds, at least until a positive diagnosis is confirmed by laboratory tests and the decision for statutory slaughter of an infected animal is carried out.

6. Notification Procedures

In the UK EIA is notifiable under the Infectious Diseases of Horses Order 1987. Under the Order anyone who has in their possession or under their charge any horse or carcass which is affected or suspected of being affected with disease, and any veterinary surgeon who in the course of their duties examines or suspects any such horse or carcass, shall notify their local Divisional Veterinary Office (DVO).

The legislation provides powers for premises where disease is suspected to be declared an infected place and restrictions placed on the horses at those premises. There are also powers requiring vector control and disinfection.

Should a horse be found to be affected with EIA, or give a positive blood test result, then it will be subject to statutory slaughter and disposal under the control of the DVO.

7. Trade Implications

In order to move between EU Member States, horses must not come from a premises which is subject to prohibition for animal health reasons and must not have had contact with equines from premises subject to prohibition. In the case of EIA, the prohibition period lasts until all infected animals have been slaughtered and then the remaining animals at the same premises have had two negative Coggin's tests for EIA carried out three months apart. All horses, except those moving between France, United Kingdom and Ireland under the Tripartite Agreement, must have an official health certificate or health declaration. EIA testing may be required for certain categories of horses before they are imported from third countries outside the EU or before horses are exported from the UK to third countries.

8. Control

Detection of infected animals and their prompt destruction and prevention of all modes of transmission are the cornerstones of EIA control measures.

Detection is based on blood testing to detect infected carrier horses, and the strict isolation of individuals under quarantine. The virus can survive in blood, dried faeces and tissues so all such material must be disinfected and removed. Disinfection can be achieved by boiling (for at least 15 minutes), and by chemicals such as hypochlorite,

iodine compounds, chlorhexidine and ethanol.

Veterinary procedures present a particular risk and good hygiene and disinfection procedures must be practised at all times. Hypodermic needles and other surgical equipment must be either disposable and destroyed after use or appropriately sterilised before use on another animal.

On suspicion of infection or contact with infected animals:

- all movements on and off the premises should be stopped immediately;
- notification should be made to the local DVO (see notification procedures section 6);
- non-urgent interventions that may pose an infectious transmission risk should also be halted straightaway.

9. Prevention

There is no vaccine available to prevent infection by EIAV

In a case of EIA in an affected country, appropriate epidemiological investigations should be carried out to ascertain whether the introduction and subsequent spread of the disease was likely to be associated with importation of infected horses or has been a consequence of human activities.

Providing the assurance has been received from the veterinary authorities of an affected EU approved country that appropriate tracing has taken place, and that all exposed or in-contact horses with known positive EIA cases have been placed under appropriate restrictions (quarantine) on the premises to prevent uncontrolled contacts or movements and are monitored by regular visits and repeated blood testing, there would be no requirement to restrict the movements of other horses between the United Kingdom (UK) and unaffected premises in the affected country.

Nevertheless, there would still be some uncertainty about the situation in the affected country and because of the nature of the disease events will continue to evolve. Owners are therefore advised to be prudent and to consider whether horse movements between the UK and the affected country are necessary until more time has elapsed and the situation has become clearer.

10. Recommendations for Prevention

10.1 Horses that have already travelled to an affected country and returned.

Where movements between the UK and an affected country have taken place the horses will present different levels of risk depending on the situation they were in in the affected country. Depending on the particular risk scenario owners should take the following action:

- Horses coming from infected premises in an affected country, or premises where horses are under quarantine or being investigated by the veterinary authorities of the affected country. In this scenario these horses, and their foals if present, are regarded as primary contacts. Any such horse is considered to be at increased risk and should be reported immediately to the local DVO who will arrange for a veterinary enquiry to be carried out. This will be to ensure that any measures taken are proportionate to the risk posed: in some cases this may mean that restrictions are placed on the premises.
- Horses that may have been in contact with a primary contact. Such horses

should be regarded as secondary contacts. They may present a risk, the level of which would depend largely on the degree and nature of the contact. For example if the contact has a valid negative Coggin's blood test result then the risk is likely to be reduced. So each case should be considered carefully but generally the advice is that such horses should be monitored and should they give cause for concern, be immediately isolated and reported to the DVM. Owners may also wish to have these horses Coggin's tested as an additional precautionary measure. This should not be carried out less than at least 30 days after the last known contact, or if not known then from the date of importation. It is recommended that this test be repeated 60 days after the last contact or date of importation – this is the last known period at which horses are known to seroconvert following exposure to infection.

- Horses that do not fall into either of the above risk scenarios for example, if they have visited other premises or areas of an affected country. It is unlikely that such horses have been at risk of contracting infection from primary or secondary contacts. However, it is recommended that owners may wish to consider the following:
 - monitoring the health of the horses and getting immediate veterinary advice should they give any cause for concern.
 - taking a blood sample for Coggin's testing. As indicated above this should not be taken until at least 30 days has elapsed from the time of last known contact or date of importation.

10.2 Horses that have yet to travel.

Should such travel be considered necessary for reasons of competition or trade, owners are advised to satisfy themselves that their horses will not come into direct contact with horses of increased risk for EIA infection, i.e. any horses that are quarantined or premises that are restricted or being investigated by the veterinary authorities of an affected country, or horses that do not have a currently valid negative Coggin's blood test result.

If the horses they come into contact with do not have a currently valid negative Coggin's blood test result, it is recommended that owners may wish to consider having their horses tested as soon as they return to the UK as a precautionary measure.

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