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BEVA/BEF/BHS EVA Briefing document

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Introduction

Equine Viral Arteritis (EVA) is a very serious viral disease of horses. EVA occurs in both Thoroughbred and non-Thoroughbred populations. EVA is currently a relatively common disease in Europe and other parts of the world and is relatively rare in the UK.

However, the risk of it increasing in prevalence (common-ness) within the UK, with potentially very serious welfare and economic effects, has increased over recent years due to the increased international movement of horses for breeding or competition purposes. It is therefore crucial that everyone in the UK involved in the horse industry is familiar with the clinical signs of the disease; the way in which the disease is spread and the control measures which should be used to minimise the risk of EVA spreading within the UK horse population.

Clinical signs

EVA causes a variety of symptoms including fever; nasal discharge; conjunctivitis; swelling of the lower legs, eye socket, scrotum and mammary gland; depression and "nettle rash" and can cause abortion. It is also possible that a horse becomes infected and has the ability to pass that infection onto other horses but shows no clinical (outwardly obvious) signs itself. EVA is a notifiable disease in the UK in stallions, and anyone who suspects that a horse is exhibiting any of the symptoms of EVA must by law notify the Divisional Veterinary Manager of Defra. This should be done promptly and it's also advisable to call your own vet.

Ways in which the disease is transmitted.

One of the major problems with EVA is that it may be transmitted by horses which show no clinical signs of disease themselves, as well as by horses which do exhibit the typical signs of EVA. Routes of transmission are:

- By the respiratory route i.e. in nasal (nose) discharges.
- During breeding, at natural cover and also in fresh, chilled and frozen semen.
- During teasing.
- Via contact with aborted fetuses and the placenta/foetal fluids.

Thus horses might become infected by any other horse which has the respiratory form of EVA and is passing on the virus via a “runny nose” or coughing and snorting; via contact with foetuses which have been aborted due to EVA and also via contact with infected semen (natural cover or AI).

Stallions which have become infected may show no signs of clinical disease themselves but can pass the disease on to mares via their semen. This may be for several weeks, months or years after infection and possibly even for life. These are the so-called “shedder” stallions. Mares bred to these stallions may or may not show any clinical signs of disease themselves but can spread EVA to other horses via the respiratory route and also via abortion.

Consider the following scenario: in a situation where EVA control measures are inadequate, a mare with the respiratory form of EVA might enter a stud, come into contact with other mares and infect those mares with EVA. The original mare and the other mares could then pass EVA to the stallion(s) during breeding. The stallion(s) could start “shedding” EVA in his (their) semen, and would infect other mares which were subsequently bred to him(them), naturally or by A.I. Because not all horses with EVA show clinical signs, those mares might then return home and infect other mares (thus potentially causing abortion) or other stallions (thus potentially causing spread to more mares) and so the cycle of infection goes on.

This example illustrates how the potential for disease transmission between horses is huge and it is for this reason that control measures must be adhered to if the spread of EVA within the UK is to be contained/reduced.

Control measures/prevention

The aim of current control measures is to prevent the spread of EVA within the UK horse population. Because the most high-risk situations in terms of disease spread are when breeding activities are taking place i.e. when mares are being covered/inseminated; mares are foaling down, and there is generally lots of movement of horses between premises, the control measures focus on animals being used for breeding purposes. Because horses which have EVA and are capable of passing the disease onto other horses do not necessarily show clinical signs of disease, control and prevention is based upon blood testing to show which animals have the disease and therefore pose a risk to other animals.

Vaccination, particularly of stallions, may also be appropriate. If a horse is blood tested for EVA (the “serological” test) the result will be either negative or positive. A negative result indicates that the horse has not been infected with the virus and is therefore generally not a danger to other horses i.e. it cannot transmit (pass on) EVA to other horses. A positive result may indicate either that the horse currently has the infection (in which case it is a risk to other animals); that it has had the infection in the past, or that it has been vaccinated against the disease.

If a horse has a positive result, it should be isolated and re-tested 2 weeks after the initial test. This is to help distinguish between those which currently have EVA and are therefore a risk to other horses and those which have had EVA at some time in the past but are not a risk to other horses.

The only way currently of distinguishing a horse which is infected with EVA from a horse which has been vaccinated against EVA is by reference to its vaccination record and the results of blood tests taken before and after vaccination. For this reason, accurate record keeping is essential. Blood testing horses to establish their EVA status before they enter a premises; testing and vaccinating stallions; quarantining horses where necessary and keeping horses in small groups of similar-aged animals are important tools in controlling the spread of EVA. Veterinary Surgeons can advise their clients on the exact measures necessary in differing circumstances.

Comprehensive recommendations are provided in the Codes of Practice which are published by the Horseracing Betting Levy Board each year, a copy of which is available free to anyone upon request (see below).

To summarise the Codes, the EVA status of ALL breeding stock (mares and stallions) should be established before breeding begins each year i.e. after January 1st as follows:

- All stallions should be blood tested to prove that they are not infected with EVA. In the event of the test coming back positive without proof that the positive result is due to vaccination, the semen must be tested to prove that it does not contain EVA.
- All mares should have a blood test taken after January 1st and within 28 days of them entering a stud/AI Centre to prove that they are not currently infected with EVA and thus do not pose a threat to other mares/stallions. Special rules apply to imported mares and these are detailed in the Codes of Practice (see below).
- No-one should inseminate semen (fresh, chilled or frozen) unless that semen is accompanied by a certificate proving that it does not contain EVA.

EVA is a potentially very serious disease for the horse population of the UK. The spread of this disease can be reduced by all horse owners, but particularly those involved in breeding horses, acting responsibly and enlisting the help of their own Vets in following the control measures outlined above.

Copies of the Code of Practice on EVA are available, free of charge, from the Horserace Betting Levy Board, 52 Grosvenor Gardens, London SW1W 0AU Tel 020 7333 0043 email: hblb@hblb.org.uk [1] They are also on the Board's website and can be viewed or downloaded in pdf format. See www.hblb.org.uk [2] and on the home page, select Codes of Practice on Equine Diseases.