CHAPTER 12.10.

INFECTION WITH *BURKHOLDERIA MALLEI* (GLANDERS)

Article 12.10.1.

General provisions

Most glanders susceptible animals are equids. Scientific data are not available for the *infection* in zebras. Camelids and various carnivores including bears, canids and felids can also be infected but play no significant epidemiological role. Glanders is a significant zoonotic disease with fatal outcome if not treated in a timely manner.

For the purpose of the *Terrestrial Code*, glanders is defined as an *infection* with *Burkholderia mallei* in an equid.

The chapter deals not only with the occurrence of clinical signs caused by *B. mallei*, but also with the presence of *infection* with *B. mallei* in the absence of clinical signs.

The following defines an *infection* with *B. mallei*:

1) *B. mallei* has been isolated from a sample from an equid; or

2) antigen or genetic material specific to *B. mallei* has been identified in a sample from an equid showing clinical or pathological signs consistent with glanders, or epidemiologically linked to a confirmed or suspected *outbreak* of glanders, or giving cause for suspicion of previous contact with *B. mallei*; or

3) antibodies specific to *B. mallei* have been identified by a testing regime appropriate to the species in a sample from an equid showing clinical or pathological signs consistent with glanders, or epidemiologically linked to a confirmed or suspected *outbreak* of glanders, or giving cause for suspicion of previous contact with *B. mallei.*

For the purpose of the *Terrestrial Code*, the *infective period* of *B. mallei* in equids is lifelong and the *incubation period* is six months.

Standards for diagnostic tests are described in the *Terrestrial Manual*.

Article 12.10.2.

Country or zone free from *B. mallei* infection

A country or a *zone* may be considered free from *infection* with *B. mallei* when:

1) glanders is notifiable in the country;

2) either:

   a) there has been no *outbreak* and no evidence of *infection* with *B. mallei* in equids during the past three years following the destruction of the last *case*; or

   b) no evidence of *infection* with *B. mallei* has been found during the past six months following the destruction of the last *case*; and there is a *surveillance* programme in place demonstrating the absence of *infection* in accordance with Article 12.10.8.;

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and

3) imports of equids into the country or *zone* are carried out in accordance with this chapter.

Article 12.10.3.

Recovery of free status

When a *case* is detected in a previously free country or *zone*, freedom from *infection* with *B. mallei* can be regained after the following:

1) a standstill of movements of equids and their germplasm from *establishments* affected or suspected of being affected has been imposed until the destruction of the last *case*;

2) an epidemiological investigation (trace-back, trace-forward), including investigations to determine the likely source of the *outbreak,* have been carried out;

3) a *stamping-out policy,* which includes the destruction of all infected equids and cleansing and *disinfection* of the affected *establishments,* has been applied;

4) increased *surveillance* in accordance with Article 12.10.8. has been carried out and has not detected any evidence of *infection* in the six months after *stamping-out*;

5) measures are in place to control the movement of equids to prevent the spread of *B. mallei*.

When the measures above are not carried out, Article 12.10.2. applies.

Article 12.10.4.

Recommendations for importation of equids from countries or zones free from *B. mallei* infection

Veterinary Authorities should require the presentation of an *international veterinary certificate* attesting that the equid:

1) showed no clinical signs of glanders on the day of shipment;

2) either:

   a) was kept for six months prior to shipment, or since birth, in the *exporting country* or *zone*; or

   b) was kept in an *establishment* in the *exporting country* for at least 30 days and was subjected to a prescribed test with negative result on a sample taken during the 10 days prior to shipment.

Article 12.10.5.

Recommendations for importation of equids from countries or zones considered infected with *B. mallei*

Veterinary Authorities should require the presentation of an *international veterinary certificate* attesting that the equid:

1) showed no clinical signs of glanders on the day of shipment;

2) was kept for six months prior to shipment, or since birth, in an *establishment* where no *case* of glanders was reported during the six months prior to shipment;

3) was subjected to a prescribed test, with negative result on a sample taken during the 30 days prior to shipment.

Article 12.10.6.

Recommendations for the importation of equine semen

Veterinary Authorities of *importing countries* should require the presentation of an *international veterinary certificate* attesting that:

1) the donor animals:

   a) showed no clinical signs of glanders on the day of collection and for the following 21 days;

   b) were kept continuously:

      i) either for a period of at least 21 days prior to, and for until at least 21 days after, the collection in a country or a *zone* free from *infection* with *B. mallei*, or

      ii) for at least six months prior to the collection of the semen and during the collection in an *establishment* or *artificial insemination centre* free from *infection* with *B. mallei* and were subjected to a prescribed test, with a negative result on a sample taken between 21 and 30 days before the collection, or in the case of frozen semen between 21 and 30 days after the collection;

2) the semen was collected, processed and stored in accordance with the recommendations in Chapter 4.5.

Article 12.10.7.

Recommendations for the importation of *in vivo* derived equine embryos

Veterinary Authorities of *importing countries* should require the presentation of an *international veterinary certificate* attesting that:

1) the donor animals:

   a) showed no clinical signs of glanders on the day of collection and for the following 21 days;

   b) were kept continuously:

      i) either for a period of at least 21 days before, and for until at least 21 days after, the day of collection of the embryos in a country or a *zone* free from *infection* with *B. mallei*, or

      ii) for at least six months prior to the collection and during the collection in an *establishment* free from *infection* with *B. mallei* and were subjected to a prescribed test, with a negative result on a sample taken between 21 and 30 days before the collection, or in the case of frozen embryos, between 21 and 30 days after the collection;

2) the embryos were collected, processed and stored in accordance with the recommendations in Chapters 4.7. and 4.9., as relevant;

3) semen used to fertilise the oocytes complies with the recommendations in Article 12.10.6.

Article 12.10.8.

Surveillance

The purpose of *surveillance* is to determine the status of a country or a *zone* with respect to *infection* with *B. mallei*.

Populations of *captive wild*, *feral* and *wild* equids should be included in the *surveillance* programme, for example through road kill or population control measures.

Clinical *surveillance* aims at detecting signs of glanders by close physical examination of susceptible animals. Clinical inspection is an important component of *surveillance* contributing to the desired level of confidence of detection of *disease*, if a sufficiently large number of clinically susceptible animals is examined.

Systematic pathological *surveillance* is an effective approach for glanders and should be conducted on dead equids on farm, at *slaughterhouses/abattoirs* and establishments for the disposal of carcasses of equids. Suspicious pathological findings should be confirmed by agent identification and isolates should be typed.

When conducting serological *surveillance* repeated testing of the equine population is necessary to reach an acceptable level of confidence.

Clinical examination and laboratory testing should be applied to clarify the status of suspects detected by either of these complementary diagnostic approaches. Laboratory testing and necropsy may contribute to confirm clinical suspicion, while clinical examination may contribute to confirmation of positive serology.