Case Definition

Dourine
(Notifiable) **July 2024**

1. **Disease Information**
   - **1.1 General Disease and Pathogen Information:** Dourine is an acute or chronic contagious disease of equids caused by *Trypanosoma equiperdum*, a protozoan parasite. Once widespread but now eradicated in many countries, it is thought to be endemic in parts of African and Asia. It has historically been reported in South America, though its current status there is unknown. Dourine is transmitted almost exclusively by coitus (typically from infected stallions to mares, though infected mares can also transmit to stallions); however, transmission may be possible through mucous membrane contact via milk during parturition or potentially *in utero.* The incubation period is highly variable, from a few weeks to several years, but the World Organisation for Animal Health (WOAH) states the incubation period is 6 months for the purposes of formulating guidance related to animal movement and isolation.
   - **1.2 Clinical Signs:** Disease is characterized by edematous lesions, nervous system impairment, and progressive emaciation. The severity and speed of progression of the disease varies with disease course ranging from a week to years. Clinical signs are typically marked by periodic exacerbation and relapse, usually ending in death; apparent recovery from disease has been reported but not confirmed. The first observable clinical sign in mares is mucopurulent vaginal discharge and in stallions is mucopurulent urethral discharge. Fever, local edema of the genitalia and mammary glands that spreads to the ventral abdomen, genital ulcers, incoordination, facial paralysis (usually unilateral), ocular lesions, anemia, and emaciation may be observed. Pathognomonic circular cutaneous plaques 5 to 8 centimeters in diameter and 1 centimeter thick (‘silver dollar plaques’) may appear. In fatal cases, the disease is usually slow and progressive, with increasing anemia and emaciation despite a good appetite.
2. **Laboratory Criteria**
   - **2.1 Agent Isolation and Identification:** Identification of *T. equiperdum* specifically is rarely accomplished, as the ability to distinguish *T. equiperdum* from *T. brucei* and *T. evansi* is highly disputed. The trypanosomes are present in low numbers in the vaginal mucus, fluid contents of plaques, and in lymph and edematous fluid of the external genitalia. *T. equiperdum* organisms are usually not able to be isolated from blood. *T. equiperdum* may be found in urethral or vaginal mucus collected from preputial or vaginal washings or scrapings taken 4 to 5 days after infection. The trypanosomes may be found in plaques shortly after eruption.
   - **2.2 Agent Characterization:** There are currently no molecular tests that distinguish *T. equiperdum* from *T. evansi* and/or *T. brucei*.

2.3 Serology: Currently available serological tests include the complement fixation (CF) test and the indirect fluorescent antibody (IFA) test. Infections with other trypanosomes (e.g., *T. evansi*) may cause cross-reactions with *T. equiperdum* serological assays.

3. **Case Classification**

3.1 Suspect Case: A susceptible equid with

3.1.1 clinical signs consistent with dourine; **OR**

3.1.2 history and/or an epidemiologic link indicating *T. equiperdum* exposure.

3.2 Presumptive Positive Case: A suspect case with a non-negative serologic (CF or IFA) test result.

3.3 Confirmed Positive Case: An equid with

3.3.1 clinical signs consistent with dourine; **AND**

3.3.2 the identification of *T. equiperdum* at the National Veterinary Services Laboratories.

4. **Reporting Criteria:** Dourine is a U.S. foreign animal disease (FAD) that is immediately reportable under the APHIS National List of Reportable Animal Diseases (NLRAD).

4.1 NLRAD reporting in accordance with the NLRAD Standards for Notifiable diseases; and by APHIS to the World Organisation for Animal Health (WOAH); **AND**

4.2 FAD or Emerging Disease Incidents also follow standard procedures according to the Policy for the Investigation of Potential Foreign Animal Disease/Emerging Disease Incidents.