protein epitopes, the sequence alignment of p26 protein was performed for four major monophyletic groups isolated in North American, China, southern Japan and Ireland respectively. The alignment analysis revealed that the defined linear epitopes were not highly conserved. The corresponding mutants were constructed and expressed in HEK293T cells. The cross-reactivity between MAbs and their respective variant epitopes was analyzed with western blotting and AC-ELISA. The results showed that 9H8 could only recognize EIAV strains isolated from China and Japan, while 1G11 could react with all the four EIAV strains. This result indicated that 1G11 have a broadly recognized capacity to p26 epitope from different EIAV strains and could serve as a useful tool for the development of new methods on the anti-EIAV antibody determination.

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Evolution of clinical, virological and histological findings of equine infectious anaemia (EIA) in naturally infected mules following immune suppression

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EIA is a disease affecting equidae, including the mule were information relative to the characteristics of the evolution of EIA in this hybrid species is scarce [1] with descriptions regarding a limited number of naturally and experimentally infected animals. Also, extensive studies on the effects of immune suppression exist only for horses and donkeys. This study reports the clinical, virological and histological findings of EIA in ten naturally infected mules that were divided into two groups on the basis of their serological reactivity in the agar gel immunodiffusione test (AGIDT): Group P were mules with a clear positive reaction, while Group N, those with an equivocal or negative in AGIDT as described in a previous paper [2]. On recruitment, none of the mules presented evident EIA clinical signs. Both groups underwent pharmacological immune suppression (IS), using dexamethasone (Rapison®) (0,11 mg/kg bw/die) for 8 to 10 days, to investigate the correlations among these characteristics in view of the risk such animals could represent in the transmission of EIA. Clinical evolution was evaluated by hyperthermia and thrombocytopenia, together with alteration of the general condition of the animal. The total observation period lasted for a minimum of 84 days, divided in 56 days pre-IS and 28 days post-IS. Viral replication was assessed using a quantitative real time PCR, in terms of viral RNA (vRNA) copies in the plasma pre and post-IS and viral DNA (vDNA) loads in the tissues of different organs (brain, lung, heart, spleen, liver and kidney) on slaughter of the animals that were also examined for gross and histological lesions. Mules belonging to both serological groups had fluctuating vRNA loads with intervals of negativity independently from the IS period. VRNA peaks, prevalently occurring post-IS, were usually concomitant to hyperthermia and thrombocytopenia. The major tissue vDNA loads were confirmed by the highest vRNA activity in the same animals, with the spleen presenting the highest levels. No relevant gross lesions were observed, while, microscopically, tissues lesions were characterised by lymphomonocyte infiltrates and moderate hemosiderosis in the cytoplasm of macrophages and Kupffer cells. From the results of this study, in view of viral peaks these animals presented as a consequence to stress related conditions, it is evident that even this hybrid species in the chronic phase of EIA, may act as potential reservoir of EIAV that is independent from their serological pattern. Moreover, animals with an equivocal serological response will probably go undiagnosed unless tests with higher sensitivity, such as the ELISA, are not routinely employed in the diagnosis of suspect cases and in surveillance programmes.

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Overview of surveillance of equine infectious anaemia (EIA) in France in 2012

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Equine Infectious Anemia virus (EIAV) belongs to the Retroviridae family, genus lentivirus as human immunodeficiency virus (HIV). EIAV infects horses, donkeys and mules and has a worldwide distribution. The virus is responsible of a persistent infection associated with clinical signs such as fever, anorexia and anemia. Non symptomatic horses are contagious and act as a viral reservoir. Consequently, positive horses need to be isolated before euthanize them. In 2012, the French laboratory network approved by the ministry of agriculture to perform the serological diagnosis of equine infectious anemia (EIA), completed 15,691 tests using Agar Gel Immuno-Diffusion (AGID). Twenty seven of these tests were positive for EIA and involved eight horses kept in the Gard and Vaucluse counties in two little towns, approximately 50 kilometers away from each other. The surveillance plan implemented following those cases led to the testing of more than 500 horses in those two counties. Phylogenetic analysis of the isolates collected from the infected equids shows that the cases reported in the Gard and Vaucluse counties in 2012 are independent. Even if these two cases are only a few kilometers away, molecular characterization of viral isolates shows that they are different and do not present a common origin. Those data confirm the information collected during surveys that showed no epidemiological link between the two premises.

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Seropositivity of Equine infectious anemia by 2005 to 2014 in provinces of north-west of Argentina

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Equine infectious anemia (EIA) is a disease caused by a lentivirus specific from equidae family. It had been diagnosed in all continents except in Antarctica. Morbidity and mortality depends on the sensibility of the population and the virus strains. The clinics symptoms of the acute presentation tend to be unspecific and infected horses often recover and remain as chronic carriers. EIA virus (EIAV) infection can result in either an acute or chronic (swamp fever) disease that typically transitions to a life-long,