Leptospirosis: Seroprevalence in equine populations and human referents in Uruguay

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Introduction.

Equine leptospirosis is thought to be uncommon because it is usually subclinical, but recent studies suggest that it is a geographically widespread infection, with varying incidence profiles and infectious serovars [1]. Because of its high population level and its use in multiple tasks, equines should be considered as a potential source of human infection [2] [3].

In Uruguay so far there are no records of leptospirosis in horses. This disease is associated mainly with the bovine reservoir [4], but certain equines share spaces with cattle and other production animals in livestock establishments, and in breeding facilities there are abundant rodents attracted by food and forage

Objectives.

1. To determine the prevalence of infection in national populations of horses, and its frequency in referring workers.
2. To determine those serogroups most frequently reactive by MAT.

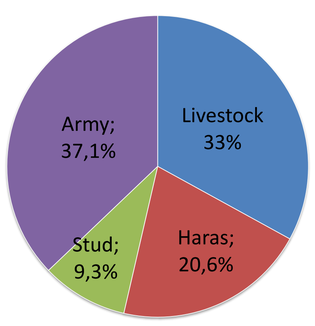
Methods.

From April 2017 to August 2018, **258 equine sera** were obtained from 28 establishments (livestock n= 79, haras n= 52 , studs n=51, Army n=51). We also obtained 84 workers' sera from these same establishments (see the map to know the geographical distribution of the samples) For equines, MAT was performed with this panel of serovars: Castellonis, Canicola, Icterohaemorrhagiae, Grippotyphosa, Pomona, Wolffii, Hardjo, Tarassovi, Hardjobovis. For workers a broader panel was used [5]. In equines, a titer ≥100 to one or more serovars was considered positive; in workers ≥400 or seroconversion. Questionnaires were applied to gather information on horses, workers, working conditions, and environment.

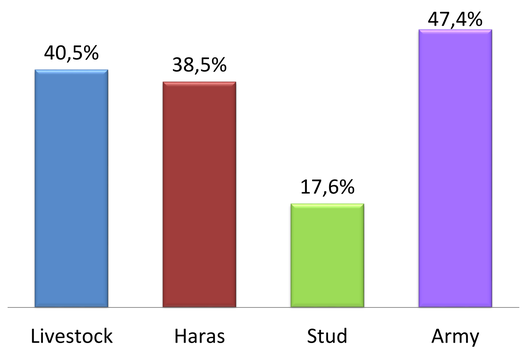
Image. Distribution of equines in the sampling

Results.

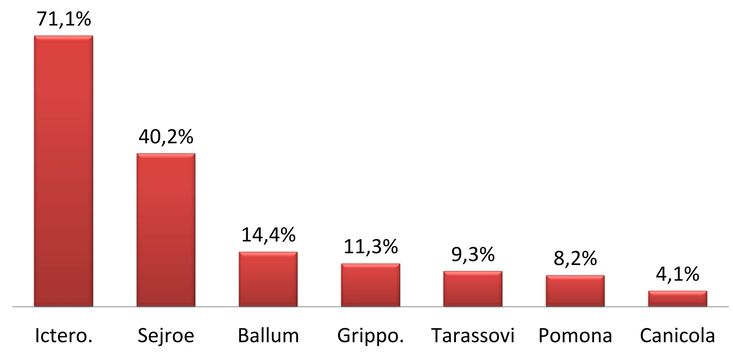
➢An overall seroprevalence of **37.4%** was observed:



Graphic 1. Contribution of each setting of equines to reactives



Graphic 2 . Seroprevalence in setting of equines (p≤0.01)



Graphic 3. Percentage of reactivity in equine sera by serogroups MAT

- No significant difference was observed in the seroprevalence according to sex or age of the animal.
- Reactivity was observed in only 2 of 84 workers, both from livestock farms.

Conclusion.

•Obtaining valid data on this disease in horses, in epidemiological terms, can contribute to the effective measures to prevent the disease and to contain its spread, such as with immunogenic preparations for specific prophylaxis. In Uruguay, immunoprophylaxis is being demanded and applied in an incipient way in horses, and it would benefit from that data that allows to guide and organize it effectively.

•It is expected to advance in diagnosis of disease, isolation of infecting strains, and inclusion in MAT panels of circulating strains in Uruguay to improve their sensitivity [6]

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Acknowledgement: To CSIC, Universidad de La República for financial support.