

Seroprevalence and risk factors of equine piroplasmosis in competition horses in Spain.

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INTRODUCTION & AIM

Equine piroplasmosis (EP) is a parasitic disease caused by *Theileria equi*, *Babesia caballi*, and, to a lesser extent, *Theileria haneyi*. It is transmitted by hard ticks, mainly belonging to the genera *Dermacentor*, *Haemaphysalis*, *Rhipicephalus*, and *Hyalomma*. The aim of the present study was to determine the seroprevalence of EP in sport horses in Spain and to identify its associated risk factors.

METHOD

A total of 1,022 serum samples collected in 2023 (n = 356), 2024 (n = 353), and 2025 (n = 313) from healthy horses of various breeds residing in 16 autonomous communities across Spain were analyzed.

The samples were tested using two commercial cELISA kits (VMRD® Inc., Pullman, WA, USA). Apparent and true seroprevalence were calculated, and a risk factor analysis was performed using binary logistic regression to evaluate different variables, including year, sex, age group, breed group, geographical area (north or south), use/purpose, and paddock access.

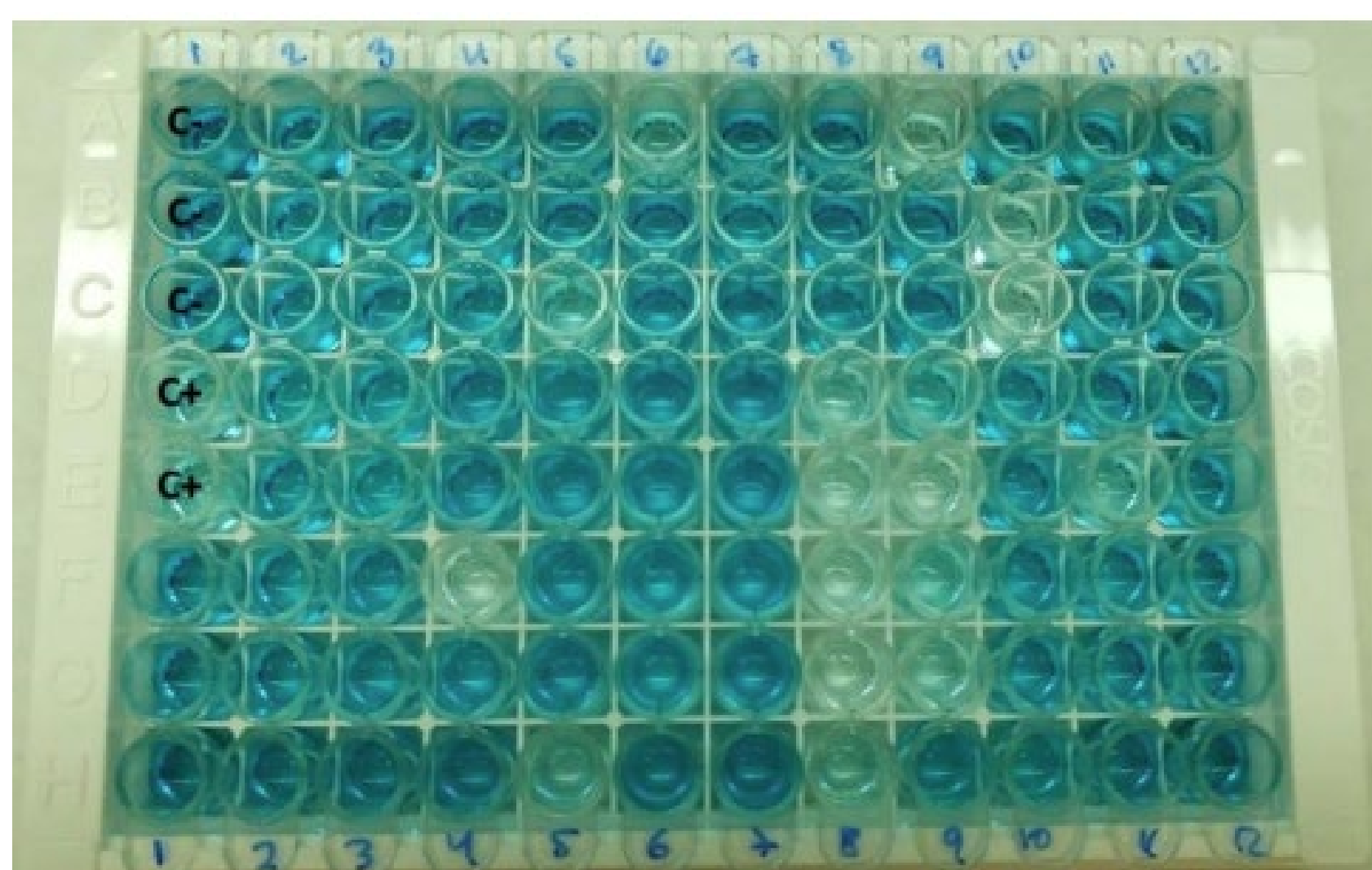


Figure 1: Coloration of wells following the cELISA assay.

RESULTS & DISCUSSION

Results showed an overall true seroprevalence of EP (*T. equi* and/or *B. caballi*) of **30.3% (95% CI: 27.5%–33.2%)**, with a decreasing trend over the three years for both *T. equi* and *B. caballi*.

Older age ($p < 0.001$) and breed (crossbred and Iberian horses, $p < 0.001$) were identified as significant risk factors.

The southern region of Spain showed a significantly higher EP seropositivity compared to the northern region ($p = 0.018$).

Neither the horse's use/purpose ($p = 0.66$) nor paddock access ($p = 0.19$) was identified as a risk factor.

CONCLUSION

Breed, age, and geographical location were identified as risk factors associated with the presence of EP in sport horses.

Increasing the number of leisure horses included in the study, as well as collecting more detailed information on paddock access and other management-related variables for all horses, could improve the assessment of potential risk factors associated with EP.

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FUTURE WORK / REFERENCES

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