The value of cytology in the diagnosis of endometritis in the mare - correlation with microbial culture

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INTRODUCTION

Endometritis is a common cause of infertility in mares, with strong economic impact, and the presence of uterine inflammation can be determined by cytology or biopsy. Microbiological analyses and testing the susceptibility to antibiotics are important to maximise the therapy efficacy.

Our **aim** was to examine the relationship between the presence of inflammation and microbial growth, including its association to the presence of Gram-positive / Gram-negative bacteria.

Fig.1 – Lusitano broodmare and foal.

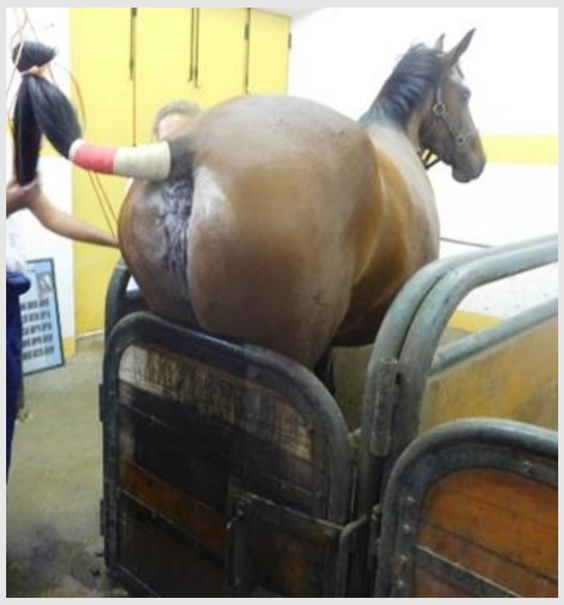
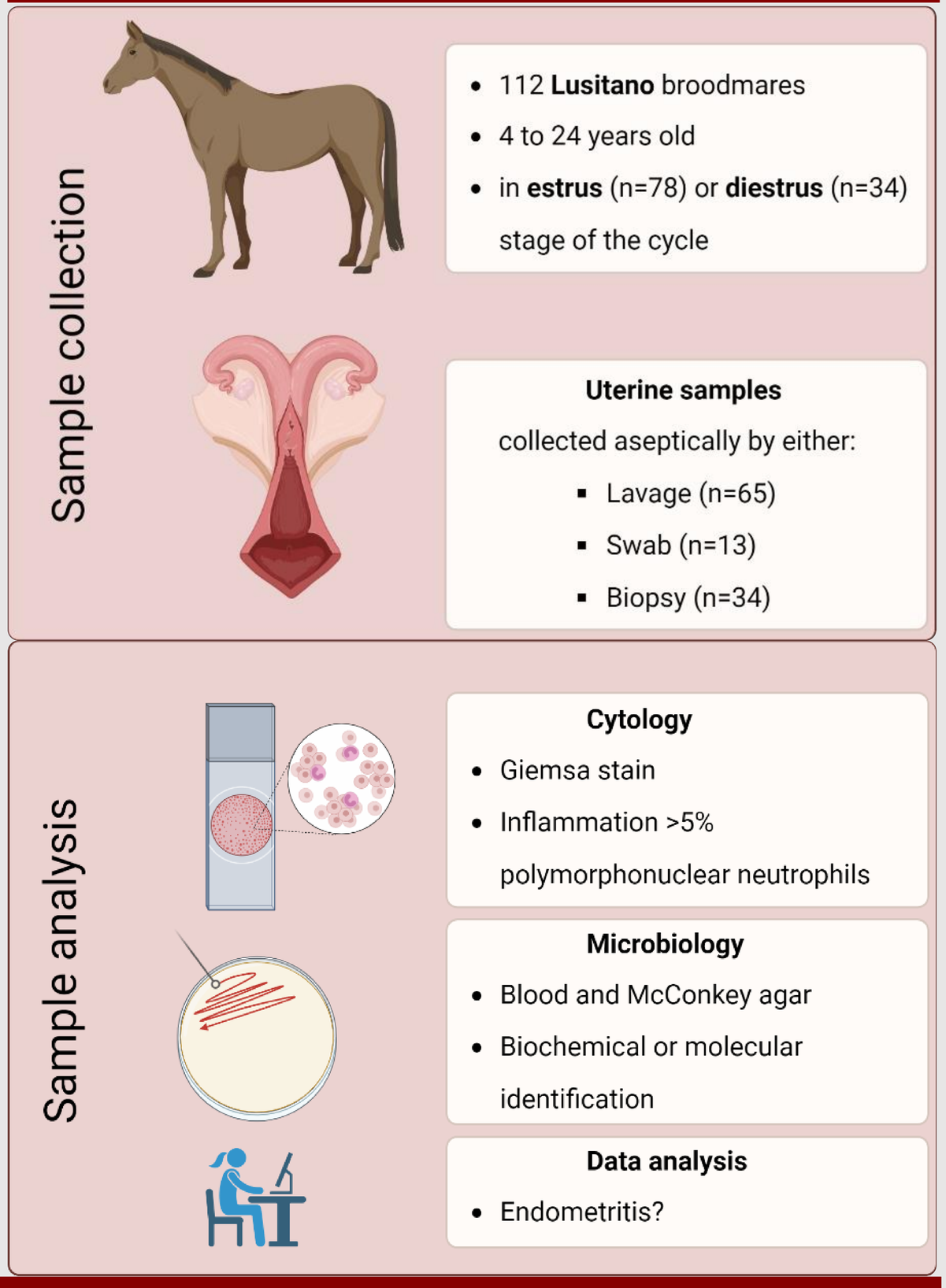


Fig.2 – Broodmare in preparation to sample collection.

MATERIAL AND METHODS



RESULTS

Bacterial growth was found in 64.8% of the samples. Uterine biopsy was the method that detected more intrauterine infections (76.5%), followed by uterine lavage (60.3%). Within samples with positive culture, 63.6% showed no inflammation on cytology, followed by 18.2% presenting moderate inflammation. Absence of inflammation occurs more often with Gram-positive bacteria (66.7%) in comparison to Gram-negative bacteria (25.9%). Severe inflammation occurred more often in association with Gram-negative bacteria (66.7%). From the mares with negative culture, 36% had some degree of inflammation.

CONCLUSIONS

- ✓ Mares with inflammation but no bacterial growth highlight the high sensibility of cytology in the diagnosis of uterine inflammation.
- ✓ A positive culture without inflammation nor clinical signs should not be considered pathogenic.
- ✓ In the mares under study, the presence of Gram-negative bacteria induced a stronger pro-inflammatory immune response.

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