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Congress of European Society of Veterinary Clinical Pathology

28th to 31st of August 2024

Satellite meeting:

European Canine Lymphoma
Network (**ECLN**), 30th of August,
Friday, From 9 am. to 2 pm.



Congress site:

University of Veterinary Medicine, Budapest
H-1078, István u. 2. Budapest, Hungary

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Performance of platelet determination using the Sysmex XN 2000V analyzer and reference intervals in horses

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Background: The Sysmex XN 2000V is a fully automated veterinary haematology analysers that can determine platelet count by three methods: impedance (I), optical (O), and fluorescence (F). A specific fluorescent platelet channel can determine an important thrombopoietic marker named immature platelets fraction (IPF).

Objective: The aim of the study was to evaluate the correlation between three methods of platelet determination and to propose reference intervals (RIs) for those, as well as for IPF, in healthy adult equine blood samples.

Methods: Fifty CBCs and blood smears with adequate platelet estimations from clinically healthy horses were examined. Statistical correlation was evaluated for PLT I, O, and F. Reference intervals based on the percentiles test (2.5%; 97.5%) were determined for PLT I, O, F, and IPF.

Results: The Statistic Correlation for platelets determination are PLT I vs PLT F $r=0.72$ $P<0,0001$; PLT I vs PLT O $r=0.74$ $P<0,0001$; PLT F vs PLT O $r=0.91$ $P<0,0001$.

The proposal RIs are: PLT I 61.2-152.8; PLT F 96.7-160.6; PLT O 96.9-170 ($10^3/\mu\text{L}$); IPF 0.3-4.06 (%); 0.4-4.14 ($10^3/\mu\text{L}$).

Conclusion: The statistical correlation is good for PLT I vs PLT F and PLT O, and excellent for PLT F vs PLT O. The reference intervals are very similar for PLT F and PLT O, but not for the lower limit of PLT I, which is probably more affected by the presence of platelet microaggregates. Determining RIs for IPF in normal subjects is essential for evaluating thrombocytopenic horses.

Keywords: reference intervals, horse, blood smear, platelet count, IPF

Reference:

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2. Jornet-Rius O, Mesalles-Naranjo M, Pastor J, 2023, Vet Clin Pathol, 433-442.
3. Friedrichs KR, Harr KE, Freeman KP, Szlodovits B, Walton RM, Barnhart KF, Blanco-Chavez J, 2012, Vet Clin Pathol, 441-453.