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Macrothrombocytopenia in Akitas: Prevalence and Platelet Characteristics in Eastern Australia

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Introduction: Macrothrombocytopenia, defined as thrombocytopenia with macroplatelets, is often misdiagnosed as immune thrombocytopenia due to inappropriate gating by automated analysers and limited clinician awareness. This benign condition is well-documented in Cavalier King Charles Spaniels and has been reported in Akitas in the USA.[1,2] However, its prevalence and clinical significance in Australian Akitas remain unknown.

Materials and Methods: Eighteen clinically healthy Akitas and 11 control dogs from Eastern Australia were studied. Blood samples underwent automated and manual platelet counts, and platelet morphology was assessed using modified Romanowsky-stained blood smears. Descriptive and non-parametric statistical analyses were performed.

Results: None of the dogs exhibited bleeding tendencies. Thrombocytopenia ($<150 \times 10^9$/L) was identified in 83% of Akitas, whereas all controls had counts above this threshold. Macroplatelets were observed in 11% of Akitas and 9% of controls. Automated counts were significantly lower than manual counts in Akitas, but no significant difference was noted in controls. Mean platelet volume (MPV) was significantly higher in Akitas. Mean corpuscular volume (MCV) was higher in Japanese Akitas.

Conclusions: Asymptomatic macrothrombocytopenia is highly prevalent in Australian Akitas, with discrepancies between automated and manual platelet counts. The condition occurs in both Japanese and American Akitas. Higher MCV suggests larger red-cell size in Japanese Akitas. Manual confirmation and breed awareness are essential to prevent misdiagnosis and unnecessary treatments. Genetic studies are needed to explore inheritance patterns, which

could not be determined in this study due to limited sample size and insufficient multigenerational pedigree data.

References

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