

Evaluation of a Point-of-Care-Viscoelastic Coagulation Device in Hispaniolan Amazon Parrots (*Amazona ventralis*)

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Abstract: Viscoelastic testing evaluates the formation and lysis of a clot over time, allowing more complete assessment of patient hemostasis in real time, whereas traditional tests, such as prothrombin time and partial thromboplastin time, only measure coagulation factor function. Patient-side viscoelastic coagulation monitors are easy to use, portable, and provide faster turnaround time than commercial laboratories. Viscoelastic testing requires only 0.2 mL of blood and is useful in diagnosing and treating hemostatic disorders. Currently, there is no standardized coagulation testing method across bird species. In this cross-sectional study, a viscoelastic coagulation device, the Entegriion Viscoelastic Coagulation Monitor-Vet (VCM-Vet), was evaluated. Blood samples were obtained from 26 Hispaniolan Amazon parrots (HAPs) (*Amazona ventralis*) under manual restraint. Results were recorded on the device as graphical output with quantitative viscoelastic measurements. Results were reported using standard rotational thromboelastometry terminology, including clotting time, clot formation time, alpha angle, maximum clot firmness, clot firmness amplitude at 10 and 20 minutes after clot formation, and clot lysis at 30 and 45 minutes. The median clotting time was 463 seconds (reference interval: 56–1635 seconds), the mean clot formation time was 704.7 seconds (reference interval: 172–1697 seconds), the mean alpha angle was 27.3 (reference interval: 7–60), and the mean maximum clot firmness was 15.4 (reference interval: 7–25). Statistical analysis found that all parameters were normally distributed aside from clotting time in seconds. There was no appreciable breakdown of the clot during the 60-minute device runtime, and there was no significant difference in any parameter based on sex. The VCM-Vet produced clotting times for this population of HAPs and enabled the creation of reference intervals. Based on our findings, the VCM-Vet can be used to assess clot potential in HAPs and possibly other avian species.