COMPARISON OF DIPOTASSIUM EDTA AND LITHIUM HEPARIN ON HEMATOLOGIC VALUES IN THE GREEN IGUANA (Iguana iguana)

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ABSTRACT

While complete blood counts (CBC) are an essential component of exotic animal medicine, there have been relatively few studies to determine the ideal anticoagulant in nontraditional species. Current practice is to use lithium heparin due to the perceived risks of hemolysis, but there have been no published studies comparing anticoagulants in the green iguana (Iguana iguana) or any other species of lizard. In this study, we compared the effects of dipotassium EDTA and lithium heparin on hematologic values of green iguanas. Thirty-two privately owned sibling iguanas had blood drawn and the sample was divided into three components: An ethylenediaminetetraacetic acid (EDTA) tube, a heparin tube, and a nonanticoagulated blood smear. A full reptilian CBC was performed on each anticoagulated sample and a white blood cell differential was performed on the whole blood smears. The results were examined for normalcy, and compared using a generalized linear model with $P<0.05$ considered significant. EDTA and heparin were statistically significantly different in absolute values of thrombocytes, white blood cells, heterophils, monocytes, and azurophils. Compared to the nonanticoagulated blood smear, the hematologic values produced with EDTA were more accurate than those produced with heparin. As EDTA had no significant effect on the hematocrit or plasma protein values and was more accurate in regards to actual white blood cell (WBC) counts and differentials, we recommend that CBCs in green iguanas be collected in dipotassium EDTA tubes.