

**BIOMEDICAL & VETERINARY SCIENCES
GRADUATE PROGRAM**



ANNOUNCES

The Master of Science Seminar and Examination of

Ashley Wilkinson

“Platelet function in dogs with chronic liver disease”

Wednesday, March 20th, 2019

8:30AM

VMIA Classroom 220

Bio



Ashley graduated from the Virginia-Maryland College of Veterinary Medicine in 2013. She then completed a small animal rotating internship at Carolina Veterinary Specialists in North Carolina, after which she practiced as an emergency clinician for two years in Richmond, Virginia. She plans on completing her residency training in small animal internal medicine this upcoming July.

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VMCVM Office of Research and Graduate Studies

Lay Language Abstract

Chronic liver disease is a common disorder in adult dogs. Liver biopsy is usually required to identify the underlying cause of liver disease and is sometimes needed to assess response to treatment. Because dogs with liver disease have abnormal clotting activity, bleeding is a substantial risk of biopsy. Routine screening for clotting abnormalities in dogs with liver disease is accomplished using prothrombin time, partial thromboplastin time, and platelet count. Unfortunately, these routine tests do not necessarily correlate with excessive biopsy-induced bleeding, which makes predicting and preventing hemorrhage during liver biopsy difficult.

Humans with liver disease have abnormal platelet function that contributes to abnormal coagulation. Because standard diagnostics do not assess platelet function, we proposed to evaluate platelet function in dogs with chronic liver disease. The primary aim of this study was to determine if dogs with chronic liver disease have platelet dysfunction and if there was a correlation between platelet function and bleeding after liver biopsy. Platelet function was assessed in 18 dogs with chronic liver disease using an analyzer that simulates blood in circulation (platelet closure time using the PFA-100) and buccal mucosal bleeding time (BMBT). Von Willebrand factor (vWF), an adhesive binding protein, was measured as well. Results were compared with those in 18 healthy age-matched control dogs.

Buccal mucosal bleeding time was significantly prolonged in dogs with chronic liver disease compared to control dogs. Platelet closure time and vWF were not found to be different between the two groups.

No dog experienced significant hemorrhage after liver biopsy and platelet closure time, BMBT, and vWF did not correlate with hemorrhage after liver biopsy.

These results demonstrate mild impairment of primary hemostasis in dogs with chronic liver disease based on prolongation of BMBT.

Normal platelet closure time with BMBT prolongation could indicate endothelial dysfunction as well or may have resulted from limitations of the methodology.

Publications

Wilkinson, A., Carr, S., Klahn, S., Dervisis, N., Hanks, C. (2018). Hemophagocytic syndrome in a cat. *JFMS Open Rep*, Jul-Dec.

Hood, R.L., Rossmesl, J., Andriani, R.T., **Wilkinson, A.**, Robertson, J., Rylander, C. (2013). Intracranial hyperthermia through local photothermal heating with the fiberoptic microneedle device. *Lasers Surg Med* 45(3), 167-74.

Presentations

Research Symposium Poster Presentation at Virginia-Maryland College of Veterinary Medicine:

“Platelet function in dogs with chronic liver disease”

March 15, 2018

Intern-Resident Seminar at Virginia-Maryland College of Veterinary Medicine:

“Extrahepatic bile duct obstruction secondary to pancreatitis in 49 dogs”

November 10, 2017

“Evaluating platelet function in dogs with chronic liver disease”

January 6, 2017

“Update on synthetic colloids”

September 16, 2016

Awards and Academic Achievements

Residency:

Bente Flatland Resident Award, 2018

Veterinary school:

James M. Stevens Scholarship, 2012

Florence A. Nocka Scholarship, 2012

Herman and Mildred Corder Scholarship, 2009

Examination Graduate Committee

Major Advisor/Chair:

David Panciera, DVM, MS, Diplomate ACVIM
Department of Small Animal Clinical Sciences

Graduate Advising Committee Members:

Stefanie DeMonaco, DVM, MS, Diplomate ACVIM
Assistant Professor
Department of Small Animal Clinical Sciences

Katie Boes, DVM, MS, Diplomate, ACVP
Clinical Associate Professor
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