BIOMEDICAL & VETERINARY SCIENCES

GRADUATE PROGRAM

ANNOUNCES

The Master of Science Seminar and Examination of

Guillermo Cardona Villalobos MV, MS, DVM

"The Condroid Conundrum: Transpharyngeal Removal of Guttural Pouch Chondroids in Horses"

Thursday, June 29th, 2023
June 30th, 2023
8:00am
VMIA 220

Bio

Guillermo Cardona graduated from UDCA in Bogotá, Colombia and moved to the United States in 2015. After working on private practice for 2 years and completing a rotating internship at the New Bolton Center of the University of Pennsylvania, he moved to Blacksburg to complete a Large Animal Surgery Residency and concurrent Master's in Biomedical and Veterinary Sciences program. After finishing his residency he will be moving to Rhode Island to practice equine surgery at Ocean State Equine

Funded by

Equine Research Competition Grant
VMCVM Office of Research and Graduate Studies

Lay Language Abstract

Strangles is a disease in horses caused by an extremely infectious bacteria with negative financial and health consequences. After infection, some horses form balls of concreted pus in a structure in their airway called guttural pouches (GPs) that allow them to continue to pass on infection to other horses. Removal of these concretions, called chondroids, is needed to stop disease transmission but current non-surgical and surgical removal techniques have limitations. Surgical laser passed through an endoscope (medical camera) allows minimally invasive surgery of the guttural pouches. We performed laser surgery on dead horse heads to create access to the GPs then evaluated the ability of a custom-made 3D printed an instrument to remove chondroid-like beads from the GP. Our results showed efficient and complete removal of the beads compared to not using a 3D instrument, with little damage to the heads. These findings are an initial step to development of a new chondroid-removal technique and may allow surgeons to be faster at removing chondroids while avoiding invasive surgical procedures.

Publications

Cardona GA, Uribe A, Ortved K. Determination of Positional Parameters of the Distal Phalanx within the Hoof Capsule in Sound Colombian Paso Horses. *J of Eq Vet Sc.* June, 2021. 101: 103434

Cardona GA, Dahlgren LA, Byron CR, McKenzie HC, Bogers SH. Cadaveric Evaluation of a 3D-printed Tool for Equine Chondroid Removal. For publication submission to *Veterinary Surgery*

Presentations

Cardona GA. The Chondroid Conundrum. VMCVM Resident Seminar Series. Blacksburg, VA 2021

Cardona GA, Dahlgren LA, Byron CR, McKenzie HC, Bogers SH. The Chondroid conundrum: Transpharyngeal removal of guttural pouch chondroids in horses. BMVS Graduate Research Symposium. Blacksburg, VA 2023

Cardona GA, Dahlgren LA, Byron CR, McKenzie HC, Bogers SH. A Novel 3D-printed Instrument Improves Guttural Pouch Chondroid Removal in Equine Cadavers. Submitted for presentation at ACVS Surgery Symposium, Lexington KY 2023.

Examination Graduate Committee

Major Advisor/Chair:

Sophie H. Bogers, BVSc, MVSc, PhD, DACVS-LA
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