Deaths Related to Gastroenteritis/Pneumonia in Captive Chinese Goral (*Naemorhedus goral arnouxianus*): a Diagnostic Plan

By: Charles Hoots  
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Dr. Belinda Thompson, Basic Science Advisor  
Dr. Barbara Wolfe, Clinical Advisor

Summary:A collection of 56 Chinese gorals (mountain goats) at a wildlife conservation facility in Appalachia believes an unidentified disease has killed many goral over the past few years. A study was undertaken to determine all causes of goral mortality at the facility, to characterize the unidentified goral disease, to determine the extent of this disease in the herd, and to devise a diagnostic plan to identify the cause. At the end of the study, it was determined that the disease affects young adult goral in mid summer, presents as lethargy, watery diarrhea, conjunctivitis, and death within 4-7 days. Severe hemorrhagic gastroenteritis, pneumonia, renal lesions, and electrolyte imbalances are also present. The extent of the disease is less than expected, with only 3 confirmed deaths over the past five years at the facility. A diagnostic plan is established to rule out top differentials, including Orbiviruses, Gammaherpes viruses, clostridiosis, pasteurellosis, salmonellosis, leptospirosis, and toxicoses.

References:


Detection & Treatment of Endometritis in Dairy Cattle  
Use of Metricheck & Metricure in New Zealand

Amanda Wilding  
Pre-Clinical Advisor: Dr. Daryl Nydam  
Clinical Advisor: Dr. Katie Beltaire  
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Of the three major post-partum uterine diseases affecting dairy cattle (metritis, endometritis, and pyometra), endometritis is the most detrimental due to its high prevalence, negative impact on fertility, and diagnostic difficulty. Clinical signs are subtle or completely absent, making endometritis challenging to detect. By 35 days in milk, the percentage of cows with clinical endometritis plateaus at about 14% due to clearing of bacterial contamination that initially afflicts >90% of the herd (McDougall, 2007; Bondurant, 1999). The dynamics of uterine inflammation and involution are vital to consider in
the context of the number of days post-partum since timing directly impacts the sensitivity and specificity of any method used to diagnose endometritis.

Metricheck was developed in New Zealand as a diagnostic tool for identifying cows with clinical endometritis eligible for treatment with Metricure, an intrauterine ceftiofur. Unlike confinement herds, seasonally grazed cattle are limited to a strict 12 month calving interval to keep peak milk production synchronized with peak pasture availability. Failure or delay in pregnancy, such as that caused by endometritis, results in decreased days in milk, limited recovery time between calving and mating season, and increased risk of culling. Cows with clinical endometritis conceive a median of 32 days later and are 70% more likely to be culled than healthy counterparts (LeBlanc, 2002). Several studies have demonstrated Metricure's pharmacological efficacy against common uterine pathogens, achieving an 80% clinical cure rate and mitigating the delay in days open linked to chronic inflammation and endometritis (Kasimanickam, 2005; Dohmen, 1995).

However, Metricure's results are not additive to the identical improvements in days open seen with prostaglandin based presynchronization protocols (Galvao, 2009). Irrespective of prostaglandin's integral role in reproductive management of United States' confinement herds, prostaglandin use is cumbersome in New Zealand's grazed herds. Therefore, despite fertility challenges presented by endometritis to both dairying systems, Metricure and presynchronization protocols may have limited transoceanic translatability.


Ileoileal Intussusception in a Three Month Old Cria

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Jennifer L. Nightingale

Basic Science Advisor: Dr. Abraham Bezuidenhout
Clinical Advisor: Dr. Thomas Divers
Resident Clinical Advisor: Dr. Toby Pinn

Case Summary:

An 11 week old intact male alpaca was examined because of signs of acute abdominal pain of 15 hours duration including rolling and colic. The evening prior to presentation, the cria was found in his stall in lateral recumbency, rolling and distressed. Intermittent colic continued throughout that evening and overnight. The following morning, he passed a small amount of hard, dry feces and discomfort
persisted. No medications were given prior to presentation and he was taken directly to Cornell. On initial examination, the cria was bright, alert and responsive, ambulatory on all four limbs with no evidence of ataxia or weakness. Vital parameters were within normal limits. Decreased borborygmi were detected on auscultation in all four quadrants of the abdomen. Immediately after leaving the stall and upon completion of the initial examination, the cria collapsed into lateral position, rolled, kicked at his abdomen and vocalized, demonstrating signs of colic. Problems included: Acute onset, moderate, intermittent colic of 15 hours duration, and decreased borborygmi in all four quadrants of the abdomen. Differential diagnoses included intestinal obstruction (due to trichophytobezoar or phytobezoar, intestinal incarceration, intussusception, strangulation), peritonitis, enteritis, and genitourinary obstruction.

Physical and ultrasonographic examination revealed a cylindrical mass in the left cranioventral abdomen, suggestive of an intussusception. Results of bloodwork were unremarkable. Emergency exploratory laparotomy was performed, and revealed a reddened 3 cm ileoileal intussusception located several centimeters proximal to the ileocecal junction. Ileal resection and end-to-end ileoileal anastomosis were performed. The alpaca's recovery from anesthesia was difficult due to upper airway obstruction, and emergency tracheostomy was performed. In the following days, the cria recovered from surgery without complications and was discharged. Fecal examination revealed Eimeria oocysts, the majority of which were E. lamae. An association of the intussusception and coccidiosis infestation was not determined.

Pertinent References: