Title:
Prospective evaluation of a strict perioperative antimicrobial protocol in horses undergoing clean and clean contaminated emergency exploratory celiotomy

Investigators:
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Study description:
Limiting the duration of antimicrobial use to the pre-surgical and operative period in appropriate surgeries may limit costs and complications without increasing risk of infection. This study is designed to compare two antibiotic protocols for use in horses undergoing colic surgery with low risk of infection with the goal of minimizing unnecessary antibiotic use in these cases.

100 horses undergoing surgery for colic will be enrolled if the following conditions are met:

- Surgeries not requiring entry into GI tract
- Surgeries requiring only needle suction/decompression of the GI tract
- Surgeries requiring an enterotomy performed at a safe distance from the incision with minimal contamination (pelvic flexure enterotomy, small intestinal enterotomy)
- Surgeries involving resection and anastomosis of the jejunum (less bacteria in lumen and easy to drape off)
- Owner consent

Horses will be excluded from enrollment for the following conditions:

- Receiving antimicrobials for unrelated reason within a week prior to presentation
- Concurrent infection is present (i.e. pneumonia, incisional infection…)
- Leukopenia (<1000 neutrophils/ul or <1500 WBC based on study)
- Contaminated surgeries

Horses will be randomly assigned to receive one of two antibiotic protocols - preoperative and during surgery only, or continuing for 72 hours after surgery. Clinicians will be blinded as to which antibiotic protocol each horse is receiving; however all horses will be receiving antibiotic care appropriate for his/her surgery. The managing veterinarian can elect to withdraw horses from the study and use antibiotics of their choice at any time if deemed necessary.

In addition each horse will have a small amount (5 ml/1 teaspoon) of blood drawn 72 hours after surgery to monitor for signs of infection or inflammation. If horses develop incisional drainage, a swab of the drainage will be collected and submitted for culture.

Costs covered by study funds include the blood test required by the study, in addition to culture of the incision if it begins to drain. All other treatments and diagnostics will be directed by the clinician on the case and be the financial responsibility of the client.
**Duration of study:**
Each horse will be involved in the study for a period of 72 hours. The study is currently OPEN.

**Potential benefits to veterinary medicine:**
The results of this study will be used to direct appropriate use of antibiotics in colic patients and minimize the risk for development of resistant bacteria. It is hoped this will also translate into reduced cost of treatment.