

GI Stasis in Rabbits

Demystifying the “Silent Killer”

- I. Rabbits have an incredibly complex and sensitive gastrointestinal tract (GIT)
 - a. This unfortunately predisposes rabbits to many different gastrointestinal (GI) disorders.
 - b. A syndrome called GI stasis is one of the more common disorders seen in rabbits

- II. Anatomy & physiology
 - a. An understanding of the unique anatomy of the rabbit is essential to understanding, diagnosing, and treating this condition.
 - b. Anatomical features unique to rabbits
 - i. Vermiform appendix
 1. Rich in lymphoid nodules
 2. “Blind end” of the cecum
 3. Secretes bicarbonate and water into the cecum for fermentation
 - ii. Sacculus rotundus
 1. Also rich in lymphoid nodules
 - iii. Fusus coli
 1. Densely innervated section of the colon
 2. AKA as the “intestinal pacemaker” due to its control of colonic motility
 3. Lacks taenia and haustra
 4. Muscular contraction creates the round shape of rabbit stool
 - c. Particle-dependent separation mechanism within the colon sorts through digestible and indigestible material
 - i. Digestible material is sent into the cecum where it undergoes fermentation
 - ii. Indigestible fiber is expelled from the anus
 - iii. This separation results in the production of two different fecal products:
 1. High fiber, firm, “typical” stool
 2. Less frequent, softer, cecotropes
 - a. Contain symbiotic microbes, vitamins, minerals and essential amino acids
 - b. Expelled together, as a cluster of pellets that is covered in mucus
 - c. Ingested by the rabbit directly from the anus
 - d. The mucus coating protects the contents of the cecotropes from the highly acidic stomach so they can pass through unharmed

- III. The complex GIT requires an appropriate diet to stay healthy.
 - a. An appropriate diet for adult rabbits consists largely of fresh grass hay ad libitum
 - i. There are many types of grass hay, including timothy, orchard, and brome
 - ii. Grass hay helps to prevent GI stasis by stimulating gut motility, moving ingested hair through the GIT, and regulating the microbiome

- iii. Leguminous hay, such as alfalfa and clover
 - 1. Too rich in protein and calcium to be fed regularly to most adult rabbits
 - 2. May be suitable for rabbits with high calcium and protein needs, including young, growing rabbits and pregnant does
 - b. Supplemental pellets and vegetables as tolerated
- IV. Diagnosis
- a. A thorough diagnostic work-up
 - i. Will help to differentiate between various GI syndromes so that appropriate therapy may be initiated
 - ii. May reveal underlying medical conditions that could be a cause or contributing factor to the development of GI stasis.
 - iii. Common underlying conditions include dental disease, lower urinary tract disease and renal or hepatic disorders
 - b. A thorough history is essential
 - c. Physical examination
 - i. Palpation of the stomach and intestinal contents is informative.
 - d. Radiographs
 - e. Complete blood count and blood chemistry
 - i. Blood glucose may be useful to differentiate between GI stasis and a GI obstruction (Harcourt- Brown FM)
- V. Treatment
- a. Rehydration of GI contents
 - i. Subcutaneous
 - ii. Intravenous fluids
 - b. Nutritional support
 - c. Pain control
 - i. A study indicated that IV lidocaine given by continuous rate infusion may be useful in treating pain associated with GI stasis (Schnellbacher)
 - d. GI motility drugs may also be indicated
- VI. Prognosis
- a. Depends on patient clinical status and underlying illness
 - b. Most rabbits will show improvement within 24-48 hours after initiating treatment
 - c. If there is no improvement, diagnostics may need to be repeated or the clinician may need to reconsider potential contributing disease.
- VII. Prevention
- a. Feed an appropriate diet
 - b. Maintain a healthy body weight
 - c. Encourage exercise
 - d. Provide constant access to fresh, clean water
 - e. Brush regularly to decrease the amount of hair ingested by the rabbit, which may become problematic secondary to GI stasis

References

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