

Ulcers, Motility, and Fleece Chewing/Sucking

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The role of gut motility in ulcer formation became clear after an e-mail from an alpaca producer regarding a sick animal. Ulcers can form as a result of partial or total blockage of the gut. These can be from animal (fleece), vegetable (undigested forage), mineral (concretions) sources, or any combination of the three. The blockage must be removed before the animal can fully recover.

Types of blockages

Bezoars of some kind should be suspected if an alpaca a) displays symptoms of abdominal distress; b) they have experienced severe or chronic stress in the past several months without the benefit of concentrated probiotics; c) hay intake has changed, either increased or suddenly stopped; or d) fleece chewing or sucking has been observed.

A. Phytobezoars

Pathogens that proliferate after severe or chronic stresses usually do not degrade forage. This allows it to accumulate in C3. The mass, or hay mat, as it is sometimes called, will continue to enlarge unless beneficial microorganisms in C1 are restored.

B. Trichobezoars

The accumulation of undigested forage can be exacerbated by a behavioral problem. Fleece chewing or sucking is a coping mechanism that can become a vice. Fleece does not digest in C1 and accumulates in C3. Hair balls can also pass into the intestines and cause partial or total blockages.

Fleece consumption can be secretive. Assume the alpaca is a sucker/chewer if they have been observed doing it at least once.

C. Concretions

When minerals, especially cal-

cium and phosphorus, are fed in excess, they can precipitate out of solution and coalesce around plant material, such as seeds. The stone can take months or even years to form. They are quite common; however, it is difficult to imagine one rattling around without causing discomfort.

D. Combinations

A fourth type of bezoar can be made up of any combination of the above, and can be found all along the digestive tract. A trichophytobezoar is a combination of both plant and animal material. Mineral stones can also tangle with fiber or forage and impair digesta passage from C3. Bezoars in general are usually associated with abdominal discomfort, anorexia, and weight loss. Diagnosis may take time, and is often confused by seeming improvements in appetite. Unless the bezoars are removed, the symptoms will return. Repeated episodes will erode animal condition and make a full recovery more difficult.

Prevention

There are some non-surgical treatments for breaking up bezoars made of plant and/or animal material. Enzymes found in pineapple and papaya (bromelin and papain, respectively), as well as cellulase have been used to break up bezoars in rabbits. As in many stress-related illnesses, prevention is more cost-effective, and may save a valuable animal from prolonged suffering.

Avoid excessive feeding of mineral. This includes combining most pelleted or granulated supplements with a free-choice mineral mix. Instead, feed a mineral-free protein/energy source, along with fresh, free-choice mineral. Homemade protein/energy

mixes are detailed in "The DIY (do it yourself) alpaca feeding system," available online at: natures-way.com/livestock_articles/articles.htm.

Use concentrated probiotics as soon as possible after severe stresses or during chronic ones, and continue for a minimum of two weeks afterwards. This will help prevent the proliferation of pathogens.

Identify and isolate fleece-suckers/chewers. This is usually a behavioral issue that may require creativity and persistence. Keep in mind that failure to replace/exchange this behavior could result in the death of the animal. If the alpaca develops symptoms of abdominal distress, make sure to tell the veterinarian that he or she has been observed sucking or chewing on fleece. Ultrasound or x-rays can often be used to locate masses.

Fleece consumption can be triggered by boredom, which is considered a stressor. Alpacas kept in dry lot can get bored. Supply toys like soccer balls or hard rubber dog toys that are too big to swallow.

Conclusion

As with most non-genetic disorders, bezoars start with stress. Although not all stress can be avoided, its effects can be minimized with the use of concentrated probiotics. Avoid over-mineralization, and isolate and "reprogram" known suckers/chewers.

About the Author:

Lark Burnham received a B.S. in Animal Science (1979) from Kansas State University and an M.S. in non-ruminant nutrition (1995) from Kansas State University, Manhattan, and a Ph.D. Doctorate in ruminant nutrition (2004) from Texas Tech University, Lubbock. Her special interests are comparative nutrition, the role of the micro flora in all mammals, fiber digestion, and probiotics. Lark currently works for Natur's Way, Inc., Horton, KS which produces MSE probiotics.