Keeping Horses Healthy: Update on Equine Gastric Ulcers

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Gastric ulcers have been reported to affect up to 90 percent of racehorses and 60 percent of show horses. Stall confinement alone can lead to the development of gastric ulcers. A horse's feeding schedule can also be a factor. When horses are fed just twice a day, the stomach is subjected to a prolonged period without feed to neutralize its naturally continuously produced acid. In addition, high-grain diets produce volatile fatty acids that can also contribute to the development of ulcers.

Stress, both environmental and physical, can increase the likelihood of ulcers, as can hauling, training and mixing groups of horses. Strenuous exercise can decrease the emptying of the stomach and the blood flow to the stomach, thus contributing to the problem.

Treatment and prevention of gastric ulcers is directed at removing these predisposing factors, thus decreasing acid production within the horse's stomach. Follow these tips from the American Association of Equine Practitioners (AAEP) to help reduce the likelihood that your horse will develop ulcers:

1. Allow free-choice access to grass or hay. Horses are designed to be grazers with a constant intake of roughage.

2. If the horse must be stalled, arrange for the horse to see the horses he socializes with. Consider offering a ball or other object that the horse can enjoy in his stall.

3. Feed your horse more frequently to aid with buffering stomach acid.

4. Decrease grains that form volatile fatty acids (VFA). Feeds such as high carbohydrate sweet feed are more likely to contribute to VFA production.

5. Medications that decrease acid production are available, but are only necessary in horses showing signs of clinical disease or when the predisposing factors, such as stress, cannot be removed.

Prevention of ulcers is the key! Limiting stressful situations along with frequent feeding or free-choice access to grass or hay is imperative. Neutralizing the production of stomach acid is nature's best antacid. Additional information also can be found on the AAEP's horse-health Web site, www.myHorseMatters.com.

Signs and symptoms:

The majority of horses with gastric ulcers do not show outward symptoms. They have more subtle symptoms, such as a poor appetite, decreased performance and a poor hair coat. More serious cases will show abdominal pain (colic) and/or bruxism (teeth grinding).

Some horses are found on their backs or continually "cast" in their stalls since this position seems to provide some relief from severe gastric ulceration.

Mild / early clinical signs:

- Change in appetite (hay preferred over grain)
- Poor athletic performance
- Irritable attitude / grouchy

Horse showing signs of being depressed and a poor appetite.

Severe / advanced clinical signs:

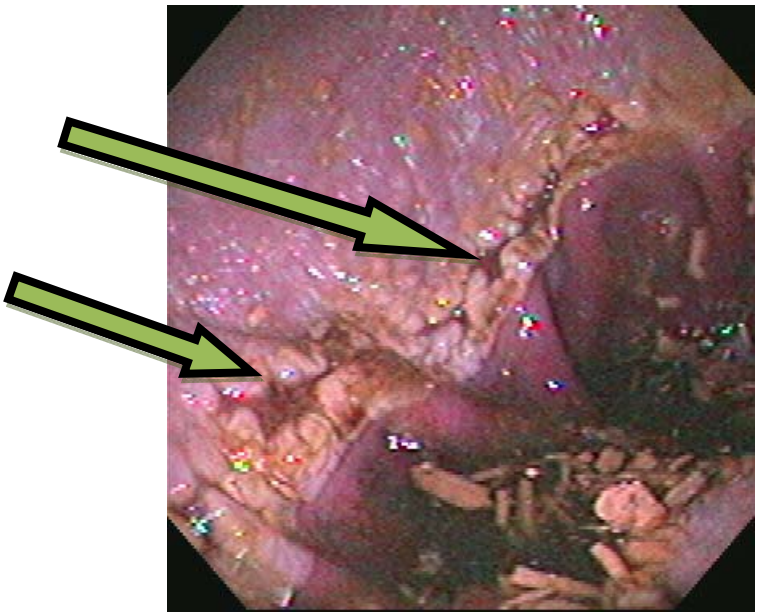
- Anorexia
- Colic
- Teeth grinding (Bruxism)
- Excessive salivation (Ptylism)
- Prolonged recumbency on their back (dorsal recumbency)

Horse showing signs of excessive drooling (ptyalism) due to gastric ulcers.

Diagnosis:

The only way to definitively diagnose ulcers is through gastroscopy, which involves placing an endoscope (long camera) into the stomach to look at its surface. To allow this, the stomach must be empty; most horses are held off feed for 12 to 24 hours and not allowed to drink water for two to three hours prior to gastroscopic examination. With light sedation and possibly a nose twitch, the endoscope is passed through the nostril and down the esophagus into the stomach. The light and camera on the end of the endoscope allow the veterinarian to observe the stomach lining.

Adult horse having gastroscopy performed.



Endoscopy image obtained from a horse with gastric ulceration (arrows).

Treatment of equine gastric ulcers:

Treatment of gastric ulcers in horses is aimed at removing the predisposing factors and decreasing acid production. When possible, horses should be allowed free-choice access to grass or hay. Environmental factors also need to be addressed, which may include relationships with other horses or the horse's vocation. Horses that must be stalled should be arranged so they can see and socialize with other horses as well as having constant access to forage. Some horses appear to enjoy having a ball or other object in the stall to occupy their time.

More frequent feedings should be offered to help buffer stomach acid. Decreasing types of grain that form the volatile fatty acids may help some horses. The energy from the grain can be replaced by using a feed higher in fat. In horses with lower caloric needs, free-choice grass hay with the appropriate vitamin and mineral supplements will help.

Medication to decrease acid production is only necessary in horses showing clinical disease or when the predisposing factors cannot be removed, such as with some horses in race training or aggressive show campaigning. While antacids sound like a good idea, to be effective they would need to be administered six to 12 times a day. Antacids in feeds are relatively ineffective because they are ingested at the same time as the feed, which will buffer the acid. Although many options are available for treating gastric ulcers, only very few are actually labeled for this purpose. Be sure to check with your equine veterinarian and use a product that is labeled specifically to prevent and/or treat equine gastric ulcers and approved by the FDA.

Prevention of ulcers is key!! Limiting stressful situations, frequent feedings and free-choice access to grass or hay is imperative. This provides a constant supply of feed to neutralize the acid and stimulate saliva production, which is nature's best antacid. When this is not adequate or possible, horses at greatest risk will benefit from medication to decrease acid production.

Inhibiting gastric acid secretion is the mainstay of gastric ulcer treatment in horses. A number of treatment modalities have been used for treatment and prevention of gastric ulcers in horses and foals. Currently, there is only one FDA approved treatment for gastric ulcers in horses, GastroGard (Omeprazole paste, Merial Limited, Atlanta, GA). However, many treatment modalities have been described in the literature. GastroGard (Omeprazole) is one of the most studied medication in horses. It is an "acid pump inhibitor" and inhibits gastric acid secretion regardless of the stimulus. GastroGard is a paste and is given to horses once daily for 28 days to treat equine gastric ulcers. It is also labeled for prevention of recurrence of gastric ulcers at ¼ dose UlcerGard (Merial Ltd.). The medication contained in GastroGard / UlcerGard is the same medication found in the "Purple Pill" Prilosec that is currently sold to humans for treatment of gastric ulcers. The formulation that is prepared by Merial is the only product that is approved for use in horses and is the only one that has been shown to be absorbed and therefore effective in horses.

In any case of suspected gastric ulcers, a qualified equine veterinarian should be consulted to determine the best course of action and treatment for the individual horse.