



Stomach Ulcers - Fact vs Reality

Update on the significant differences between Equine Squamous and Equine Glandular Gastric Disease

EGUS inadequately differentiates the affected regions of the Equine stomach.

EGUS (Equine Gastric Ulcer Syndrome) has been the “buzzword” in equine circles since 1999. However, this term incompletely details what is affected and how the stomach is affected. Yet, it remains an overriding term for ulcerative and erosive diseases of the stomach. In the figure 1, below, you can see that the equine stomach is divided into glandular (acid secreting) and non glandular (squamous) sections separated by a band of tissue named the margo plicatis (folded border).

Equine Squamous Gastric Disease (ESGD) is what we usually think of when we discuss horses having “ulcers”. Ulcers in the upper or non glandular part of the equine stomach may develop secondary to “stress” - hard work, minimal turnout. They may also develop from delayed emptying of the stomach. Equine Glandular Gastric Disease (EGGD), in contrast, has origins that remain unknown. ESGD, we know develops proportionally to the intensity of work and management. EGGD, on the other hand, does not have the same linear relationship with work and management. However, there is a clear association of ulcer formation with acidic pH. Glandular tissue sits in a pool of highly acidic (pH 2) fluid and coupled with medications like

phenylbutazone (at a dose of 2 grams twice a day for 7 days), ulcers in the glandular mucosa can be reliably induced. Evidence for a bacterial component (as seen in human ulcers) is lacking.

Remember, ESGD does not equal EGGD, not with treatment and not with symptoms.

Clinical signs

ESGD affected horses are more likely to have sub optimal performance - weight loss, poor appetite, poor body condition score. EGGD affected horses may present with unexplained weight loss, but far more commonly with a change in behavior.

To determine the type of gastric disease present, we need to perform an endoscopic examination of the stomach. With a long (3 to 3.5m) flexible endoscope (gastroscope) we can view the stomach after fasting the horse for 16 to 20 hours. This clears the stomach of large amounts of roughage that may obscure the glandular portion. Fecal blood tests have no diagnostic value with a high rate of both false positives and false negatives.



FIGURE 1: Anatomy of the stomach of the horse (image ©RVC 2008)

Treatment

After gastroscopy, it is important to note that lesion grade does not correlate with clinical signs. Three weeks into treatment, ulcers in the squamous area of the stomach should be healed - WITH ADEQUATE ACID SUPPRESSION. During treatment we have to rethink how we feed hay. Ad lib hay (free choice hay) actually impedes treatment efficacy. To improve treatment efficacy, remove residual hay by 10pm, feed your horse 60 to 90 minutes AFTER giving omeprazole (Gastrogard™, Ulcergard™), and give hay prior to grain. Further, it is important to note that oral omeprazole rarely suppresses acid production for 24 hours. Finally, sucralfate, ranitidine (Zantec), and misoprostel may help refractory cases; ideally, performing gastroscopy 3 weeks into treatment will allow you to identify those horses that need additional help. Purina's Outlast™ gastric supplement has both a long lasting effect and does support gastric pH by buffering stomach acid.

An injectable formulation of omeprazole is due to be released soon. This will allow for much easier treatment with minimal disruption in management.