PREVALENCE OF GASTRIC ULCERS IN HORSES USING THE THERA-TREE® SYSTEM

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KEY WORDS
Equine, Ulcers, Thera-three, Far infrared radiation.

INTRODUCTION

Equine Gastric Ulcers has a prevalence as high as 90% among sport horses. The cause is multifactorial and include age, breed, training level, fasting, temperament of the horse, and stress[1]. Despite dietary and environmental changes made and the use of veterinarian prescribed FDA approved medication for treatment or prevention of gastric ulcers in horses that had been diagnosed with a gastroscopy, based on their observations, horse owners frequently cite stress as the leading triggering cause of the repetitive nature of the condition (Dr. Castro-personal observation).

The Thera-Tree® is a device based on Smart Ride Rx saddle tree technology from Tad Coffin Performance Saddles[2]. The devise is advertised to alleviate equine back pain and to reduce stress and anxiety by emission of an electromagnetic field in the far infrared (FIR) spectrum. Far Infrared energy (FIR) is known to induce relaxation, reduce inflammation, lessen pain and promote healing[3].

The objective of this study was to determine the prevalence of gastric ulcers in horses that are using the Thera-tree® system and are in an active and intense training schedule.

MATERIALS AND METHODS

5 horses from the Tad Coffin research and training center were used. They were 4 geldings and 1 mare; age range from 9 – 30 years old; 4 Thoroughbreds and one Irish Sports Horse.

These horses had been at Tad Coffin's research and training center anywhere from 1 to 9 years. All of them were healthy, with an ideal body condition score, and according to the history none had ever displayed any signs of gastric ulceration. Depending on the season these horses only spend between 2-8 hours a day grazing and have a diet consistent of free choice orchard grass hay, supplemented since 1985 with 1-2 cups twice a day of 12-14% TizWhiz nutrition feed.[a]

The horses are ridden regularly and use the Thera-tree® system daily according to the manufacture recommendation and settings.

After a physical exam, all horses were sedated using an intravenous combination of Detomidine[b](0.01 mg/Kg), Butorphanol[c] (0.01 mg/Kg) and Acepromazine[d] (0.01 mg/Kg). All horses were fasted for 12 hours and water was withdrawn 2 hours prior to gastroscopy. A gastroscopy evaluation was performed in a routine manner using a 3-meter gastroscope[e] and the presence of gastric ulcer was graded as follows:

Equine Gastric Ulcer Scoring System*

0	The epithelium is intact and there is no appearance of hyperkeratosis
I	The mucosa is intact, but there are areas of hyperkeratosis
II	Small, single or multifocal lesions
III	Large single or extensive superficial lesions
IV	Extensive lesions with areas of apparent deep ulceration

*European College of Equine Internal Medicine Consensus Statement—Equine Gastric Ulcer Syndrome in Adult Horses. J Vet Intern Med. 2015 Sep-Oct; 29(5): 1288–1299

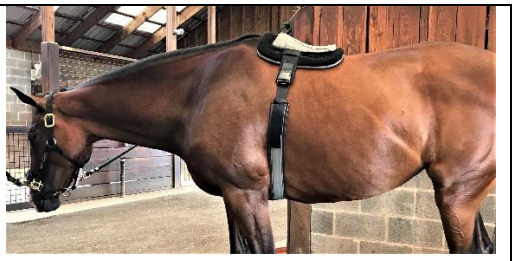
RESULTS

HORSE	AGE	BREED	GENDER	Thera-tree Usage (Years)	TEMP (°F)	PULSE (BPM)	RESPIRATORY (BPM)	GASTRIC ULCER SCORE	OTHER
1	15	TB	Mare	7	99.8	32	12	Grade 2^	Ptyalism
2	30	ISH	Gelding	9	98.7	24	8	Grade 0	Ptyalism
3	9	TB	Gelding	1.5	98.5	32	12	Grade 0	Ptyalism
4	15	TB	Gelding	8	98.9	28	16	Grade 2^^	Ptyalism
5	9	TB	Gelding	1	99.8	24	12	Grade 0	Ptyalism

^ Horse 1: 2 small ulcers with moderate generalized hyperkeratosis. The ulcers appear to be active.
^^Horse 4: 2 small ulcers surrounded by hyperkeratosis. The ulcers appear non active.
Note: There was no evidence of glandular mucosa ulceration in any horse.

2 very small ulcers (green circle) with moderate generalized hyperkeratosis (yellow) ©DCLAH 2021

Copious ptyalism found the stomach ©DCLAH 2021



A horse using the Thera-tree

CONCLUSIONS

The overall prevalence of non-glandular gastric ulcers in horses using the Thera-Tree® was 40% below the published prevalence. The grading score of the present ulcers was 2. This is a remarkable find considering the high level of training these horses are maintained at. It is noteworthy to mention the calm nature of all these horses, even while fasted, and the low resting heart rate. Special mention should be made to the copious ptyalism observed in all horses when compared with horses regularly scoped at Davie County Large Animal Hospital. Whether this is a cause or effect of the Thera-Tree® system is worth further investigation as it could be a reason for the absence of known ulcer history and/or clinical signs, and the low prevalence of gastric ulcers found.

FOOTNOTES

a) Tizwhiz Nutrition http://www.tizwhizfeeds.com/
b) Detomidine. Zoetis Inc. 10 Sylvan Way Parsippany, New Jersey 07054 (USA)
c) Butorphanol. Pfizer Australia. Pty Ltd 38-42 Wharf Road West Ryde NSW 2114
d) Acepromazine. VetOne sold exclusively through MWI Animal. http://www.mwiah.com
e) Karl Storz. Tuttlingen (Germany)

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CONFILICT OF INTEREST

The authors declare that there were no conflicts of interest. No external funding was used in this research.