Occurrence of cardiac arrhythmias in Standardbred racehorses.

Slack J1, Boston RC, Soma LR, Reef VB.

Source


Reasons for performing study

Cardiac arrhythmias are a recognized but poorly characterized problem in the Standardbred racehorse. Frequency data could aid the development of cardiac arrhythmia screening programs. The aim of this study is to characterize the occurrence of cardiac arrhythmias in Standardbreds prior to racing and in the late post-race period using a hand-held, non-continuous recording device.

Materials and methods

This is a prospective, observational study with convenience sampling. Non-continuous electrocardiographic (ECG) recordings were obtained over a 12-week period from Standardbred horses competing at a single racetrack. ECGs were obtained before racing and between 6 and 29 min after the race using a handheld recording device. Prevalence of arrhythmias was calculated for all horses and overall frequency of arrhythmias was calculated for race-starts and poor performers. Univariate logistic regression analysis was used to identify risk factors for cardiac arrhythmias.

Results

A total of 8,657 ECG recordings were obtained from 1,816 horses. Six horses had atrial fibrillation after racing (prevalence = 0.11%, frequency = 0.14%), one horse had supraventricular tachycardia before racing (prevalence = 0.06%, frequency = 0.02%), and 2 horses had ventricular tachyarrhythmias after racing (prevalence = 0.06%, frequency = 0.05%). The frequency of atrial fibrillation amongst race-starts and poor performers was 1.3-2.0%. Increasing age was a significant risk factor for the presence of atrial premature contractions before racing and atrial fibrillation and ventricular ectopy after racing.

Conclusions and clinical relevance

Both physiologic and pathologic cardiac arrhythmias can be detected in apparently healthy Standardbred horses in the pre-race and late post-race period using non-continuous recording methods. Future studies should examine cumulative training or racing hours as a risk factor for cardiac arrhythmia. The prevalence and frequency information may be useful for track veterinarians and regulatory personnel following trends in cardiac arrhythmias.

Efficacy of a pectin-lecithin complex for treatment and prevention of gastric ulcers in horses.

Sanz MG1, Viljoen A, Saulez MN, Olorunju S, Andrews FM.

Source


Reasons for performing study

The objective of this study was to evaluate the effect of a commercial feed supplement containing pectin-lecithin on squamous mucosa ulceration in horses exposed to an experimental ulceration model.

Materials and methods

Five mares were treated and five mares were controls for this crossover, blinded study. The mares were fed concentrates and hay and were stabled with a two-hour turn out per day for a period of four weeks. The pectin-lecithin complex was fed for the duration of the study on the treated group. At the end of a four-week period, all mares underwent a seven-day alternating feed deprivation (week 5). The study was repeated again after a four-week washout period. Gastroscopy was performed on days 1, 28 and 35 of the study and was digitally recorded. Independent evaluation of the recordings and scoring of the lesions using the Equine Gastric Ulcer Syndrome (EGUS), severity and number scores were performed by three experienced gastroscopists.

Results

The prevalence and severity of squamous ulcers significantly increased after intermittent feed deprivation (P<0.001). No significant effect of the treatment was observed (P>0.05).

Conclusions and clinical relevance

In this study, the addition of a commercially available pectin-lecithin complex to the feed of horses for five weeks did not prevent or minimise the risk for gastric ulceration of the squamous mucosa.