

EVALUATION OF LIPASE AND AMYLASE LEVELS IN THE DIAGNOSTIC INVESTIGATION FOR THE EQUINE ACUTE ABDOMEN.

O. Kutasi¹ , L. Moravszki¹ , E. Bodai¹ , K. Joo² .

¹Equine Department and Clinic, Faculty of Veterinary Sciences, Szent Istvan University, 2225-H, Üllő, Dora major, Hungary, ² Large Animal Research Group of the Hungarian Academy of Sciences and Szent Istvan University, 2225-H, Üllő, Dora major, Hungary

Lipase and amylase enzymes are mainly produced by the pancreas in horses. Increased lipase and amylase levels occur with acute pancreatic damage. Perturbation of the pancreatic microvascular perfusion is an important pathogenic factor in cases of pancreatitis. Our objective was to investigate the relationship between lipase and amylase levels and disease categories that cause acute abdominal pain in horses. Medical records were reviewed for horses with acute colic between 2011 and 2013. Lipase and amylase levels were measured in 96 cases. Diagnosis was based on clinical signs, rectal examination, abdominal ultrasonography and when appropriate surgical or pathological findings. Using these diagnostic methods primary acute pancreatitis (AP) and proximal enteritis (PE) could not be differentiated in all cases. Twenty-five horses (26%) showed increased lipase or amylase values. Six of them (24%) was diagnosed with AP/PE. All horses with lipase level higher than 1000 IU/l belonged to this group. Six horses (24%) had right dorsal displacement (RDD) of the large colon with average lipase and amylase levels of 623.8 IU/l and 53.5 IU/l respectively and 13 cases had diverse causes of acute abdominal pain with average lipase level of 194.4 IU/l and amylase level of 13.5 IU/l, all with high standard deviations. Fisher's exact test was used to verify that the lipase and amylase levels are useful in separating AP/PE from RDD or either of these from other diseases. The data suggest that extreme values could be very strong predictors, but larger sample would be needed for quantitative results in this direction.