Magnesium alterations on horses suffering from colic

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Introduction and Objectives

Objectives:

1. Analyse the effect of intravenous Magnesium supplementation on hypomagnesemic horses with colic
2. Analyse the prevalence of hypomagnesemia on different types of colic.

Materials and Methods

Group 0 — Normomagnesemic Horses n=70

Group 1 — Hypomagnesemic Horses without treatment n= 26

Group 2 — Hypomagnesemic Horses with treatment n= 7

Obstructive | Ischemic | Inflammatory | Others

Statistics performed with R-Studio using a confidence interval of 95%.
Treatment: Magnesium Injection (MgSO4).
Dose: 150 mg/mL.
Administration Fluid range: Adjusted to requirements never above 100 mg/kg/h.
Analysis of the samples performed with Stat Profile Prime Plus Vet Analizer, Nova Biomedical, Waltham, MA, USA.

Results and Discussion

Survival: Although we have seen differences in the survival percentage between the groups, statistically aren't considered as significant.

Length of hospitalization: Statistically differences were found between group 0 and 1. To see if there could be other factor inflecting the results a second classification was performed attending the etiology. In our population ischemic animals reduce their hospitalization days when treated with magnesium injection.

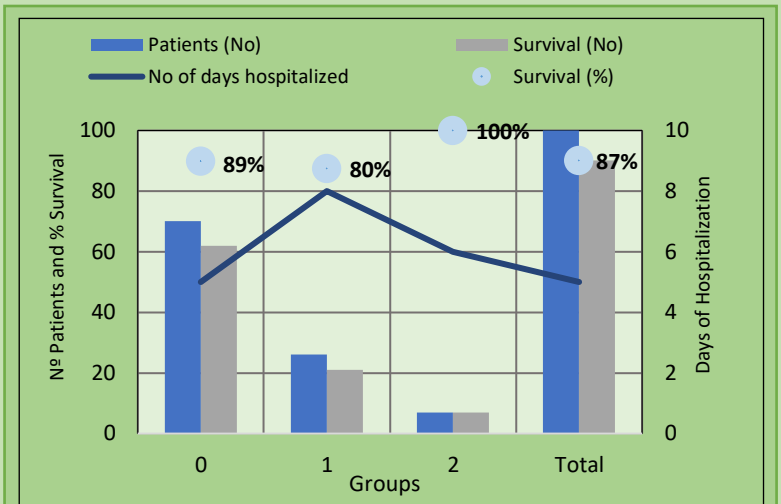

Figure 1: Effect of Magnesium Injection on Survival and Length of Hospitalization.

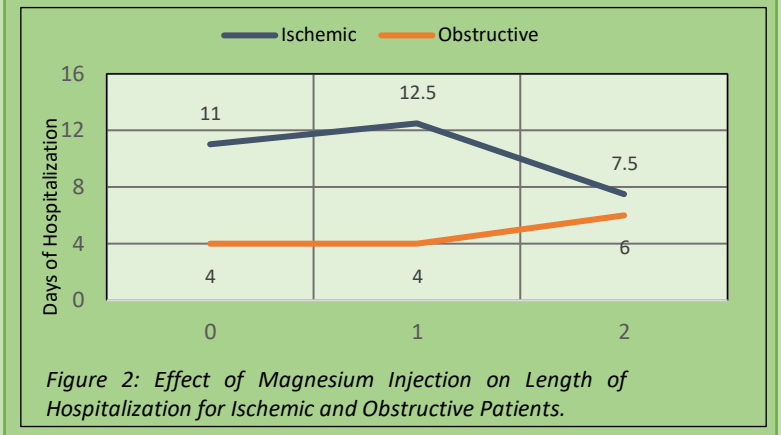

Figure 2: Effect of Magnesium Injection on Length of Hospitalization for Ischemic and Obstructive Patients.

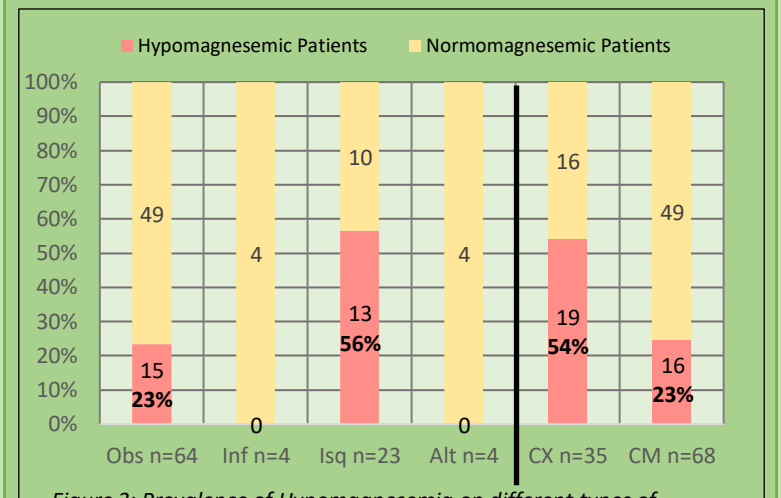

Figure 3: Prevalence of Hypomagnesemia on different types of colic.

Conclusion

Horses in the ischemic and surgical group have the highest prevalence of Hypomagnesemia.
More research must be done to properly evaluate the effect of supplementing with magnesium injection horses with hypomagnesemia. The results of this study suggest that the treatment could benefit ischemic colic reducing the hospitalization days.