Proceedings of the 18th Annual Meeting of the Italian Association of Equine Veterinarians SIVE

Feb. 3-5, 2012 - Bologna, Italy

Next SIVE Meeting:

Feb. 1-3, 2013 – Arezzo, Italy

Reprinted in the IVIS website with the permission of the Italian Association of Equine Veterinarians – SIVE http://www.ivis.org
A RESTROSPECTIVE STUDY OF HORSES INVESTIGATED FOR WEIGHT LOSS DESPITE A GOOD APPETITE (2002–2011)

L. Metcalfe, BVSc, MRCVS1, S. More, BVSc, MVB, Dip PM, PhD, MANZCVS, FANZCVS, Dip ECVP, Dip EBHM2, V. Duggan, MVB, PhD, Dip ACVIM, Dip ECEIM1, L. Katz, DVM, MS, PhD, Dip ACVIM, Dip ECEIM, MRCVS1

1 Section of Veterinary Clinical Studies, School of Veterinary Medicine, University College Dublin, Dublin, Ireland
2 Section of Herd Health & Animal Husbandry, School of Veterinary Medicine, University College Dublin, Dublin, Ireland

Purpose of the work. Weight loss despite a good appetite is a frequent diagnostic challenge in equine practice, with mechanisms broadly classified as inadequate utilization of nutrition or increased nutritional requirement (Foreman 2009). However, there are few objective reports of clinical cases and little descriptive information regarding risk factors and prognostic indicators. Thus, the objective of the study was to evaluate the relationship between historical and clinicopathological findings and final outcome (survival vs. non-survival) in order to identify risk factors and prognostic indicators.

Materials and used methods. Medical records of all equine cases greater than 1 year of age referred between April 2002 and May 2011 for investigation of weight loss despite a good appetite were reviewed. Data collated included history (season of admission and disease onset, duration of clinical signs prior to referral, management, time in owner’s possession, type of work performed, treatment prior to presentation), signalment, clinical and diagnostic findings, as well as final diagnoses and outcome including any post-mortem findings. Outcome was categorized into non-survival (death/euthanasia at the hospital or within 12 months of discharge) and survival (alive =1 year). Data were analysed with a Mann-Whitney U test, Fisher’s Exact test and Pearson’s rank correlation to establish significance of association between outcome and collated variables. Significance was set at P = 0.05.

Outcomes. Forty cases met the inclusion criteria and consisted of 13 Thoroughbreds and 27 non-Thoroughbreds, with gender equally distributed (19 males and 21 females); information up to 12 months from discharge was available for 34/40 cases. The majority of cases were reported to develop the problem in the summer but were admitted in the winter with the largest proportion (14/36) of cases referred between 1 and 3 months after development of weight loss despite a good appetite. Of the 40 cases, 17 horses were placed into the survival category. All cases had a haematology and serum biochemistry performed at admission, with albumin concentrations significantly (P = 0.008) higher in survivors (29.1 ± 6.5 g/L) compared to non-survivors (22.8 ± 5.4 g/L) and positively correlated with outcome (r² = 0.23; P = 0.005). Fisher’s Exact test analysis revealed animals with a lower total protein (P = 0.029, OR = 7, 95% CI = 1.22 – 40.1) and albumin (P = 0.032, OR = 6, 95% CI = 1.22 – 29.5) concentrations were at greater risk for non-survival. Body condition score had been assessed in 93%) of cases and found to be positively correlated with total protein (r² = 0.17; P = 0.03) and albumin (r² = 0.53; P < 0.0001) concentrations at admission as well as duration of clinical signs (r² = 0.19; P = 0.03).

Conclusions. Total protein and albumin concentrations at admission were associated with survival, with the severity of hypoproteinaemia and hypoalbuminaemia related with a worsening prognosis. In addition, body condition score was positively correlated with albumin concentration. It was concluded that body condition score in conjunction with albumin concentrations could possibly be used as prognostic indicators for survival (i.e., horses with poorer body condition scores...
have a worse prognosis for survival). It was further concluded that the positive correlation of clinical sign duration with body condition score most likely reflected the severity of the underlying disease, with the more severely affected animals losing weight and condition more quickly and being referred for evaluation sooner. Overall, these findings highlight the importance of body condition assessment in conjunction with clinicopathological evaluation for horses evaluated for weight loss despite a good appetite. Additional studies with a larger sample population are warranted for further investigation.

Bibliography

Corresponding Address:
Ms. Lucy Metcalfe - Section of Veterinary Clinical Studies, School of Veterinary Medicine, University College Dublin, Belfield, Dublin, Ireland - E-mail lucy.metcalfe@ucd.ie