

PUBLISHED VERSION

J.P. Farrugia, S.H. Franklin, E.J.M.M. Verdegaal

Owner's survey of electrolyte supplementation in Australian endurance horses, preliminary results

Abstracts of the European College of Equine Internal Medicine Congress 2015, as published in Journal of Veterinary Internal Medicine, 2015 / vol.30, iss.3, pp.909

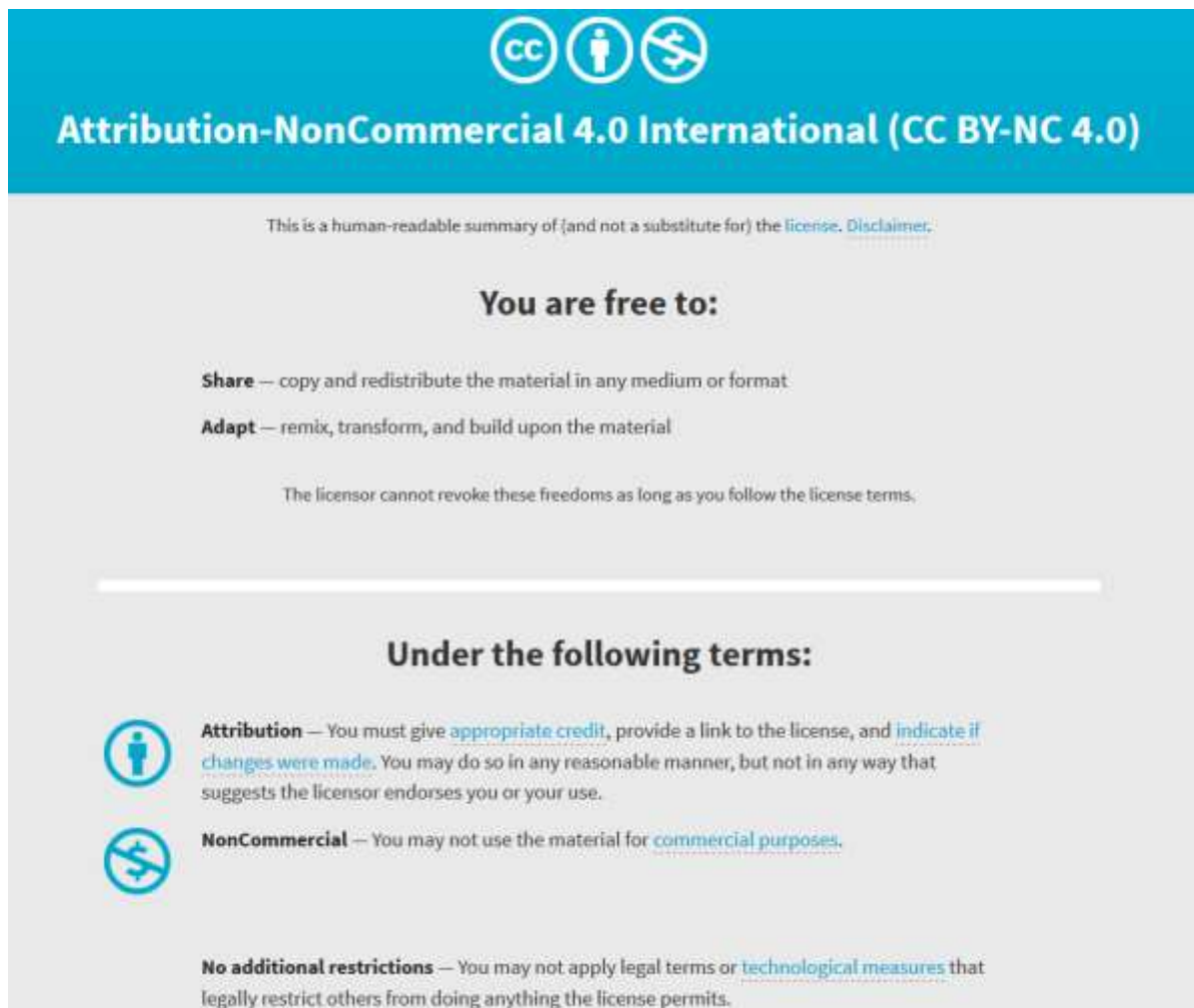
Copyright © 2015 by the American College of Veterinary Internal Medicine. Articles published by the Journal of Veterinary Internal Medicine are fully open access: immediately freely available to read, download and share. Journal of Veterinary Internal Medicine articles are published under the terms of the Creative Commons Attribution Non-Commercial License (CC BY NC), which permits use, distribution and reproduction in any medium, provided the original work is properly cited and is not used for commercial purposes.

https://onlinelibrary.wiley.com/page/journal/19391676/homepage/open_access_license_and_copyright.htm

Published version [http://dx.doi.org/ 10.1111/jvim.13925](http://dx.doi.org/10.1111/jvim.13925)

PERMISSIONS

<http://creativecommons.org/licenses/by-nc/4.0/>



The image shows the Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) license graphic. It features a blue header with the CC logo, a person icon, and a crossed-out dollar sign icon. Below the header, the text reads "Attribution-NonCommercial 4.0 International (CC BY-NC 4.0)". A disclaimer states: "This is a human-readable summary of (and not a substitute for) the license. Disclaimer:". The main body is divided into two sections: "You are free to:" and "Under the following terms:". Under "You are free to:", it lists "Share" (copy and redistribute the material in any medium or format) and "Adapt" (remix, transform, and build upon the material). A note states: "The licensor cannot revoke these freedoms as long as you follow the license terms." Under "Under the following terms:", it lists "Attribution" (You must give appropriate credit, provide a link to the license, and indicate if changes were made) and "NonCommercial" (You may not use the material for commercial purposes). A final note states: "No additional restrictions" (You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits).

You are free to:

- Share** — copy and redistribute the material in any medium or format
- Adapt** — remix, transform, and build upon the material

The licensor cannot revoke these freedoms as long as you follow the license terms.

Under the following terms:

- Attribution** — You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.
- NonCommercial** — You may not use the material for commercial purposes.

No additional restrictions — You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.

9 November 2018

<http://hdl.handle.net/2440/115950>

A1
PERI-PARTURIENT CHARACTERISTICS OF THOROUGHBRED MARES AND THEIR FOALS IN A NEW ZEALAND SETTING. C. Rosales¹, N. Krekeler¹, B. Tennent-Brown¹, D. Hanlon². ¹Equine Centre, Faculty of Veterinary and Agricultural Sciences, University of Melbourne, Victoria, Australia, ²Matamata Veterinary Services, Matamata, New Zealand

Despite differing management systems, observations regarding gestation length and peri-parturient behaviour of mares and foals have mostly been limited to the Northern Hemisphere with few studies conducted in the Southern Hemisphere. Data were collected from one Thoroughbred stud farm in New Zealand over six consecutive breeding seasons (969 foaling records). At the time of foaling the gestation length, presentation, position and posture of the foal, time taken for the foal to stand and nurse and fetal membrane retention time was recorded. Gestation length for mares in this study was 349 ± 10 days. Gestation length for filly foals (348.3 days) was significantly shorter than for colt foals (350.7 days) and gestation length increased with increasing age of the mare. Most mares (53.5%) foaled between 7.00 pm and 1.00am and the occurrence of daytime foaling was 22.2%. Of the 969 foalings, 97.4% produced a live foal. The dystocia rate was 7.3%. Risk factors for perinatal foal death included being a colt and the occurrence of dystocia. Fillies were significantly ($P < 0.001$) quicker to stand and nurse than colts. Ninety five percent of mares had expelled their fetal membranes within four hours of parturition. Whilst some of these findings are similar to the results of studies performed in Northern Hemisphere populations, gestation length appears to be longer in this population of mares and there is a relatively high number of daytime foalings. Based on these findings, it is proposed that retained fetal membranes should be defined as retention beyond 4 hours post-partum.

A2
PREVALENCE OF EXERCISE-INDUCED PULMONARY HEMORRHAGE IN COMPETING ENDURANCE HORSES. I. Tarancón¹, L. Armengou^{1,2}, A. Melendez-Lago², J. Ríos³, J. Pastor², E. Jose-Cunilleras^{1,2}. ¹Servei de Medicina Interna Equina, Unitat Equina-Fundació Hospital Clínic Veterinari, Facultat de Veterinària, Universitat Autònoma de Barcelona, Barcelona, Spain, ²Departament de Medicina i Cirurgia Animal, Facultat de Veterinària, Universitat Autònoma de Barcelona, Barcelona, Spain, ³Institut d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS) - Hospital Clínic Barcelona, Barcelona, Spain

To assess the prevalence of exercise-induced pulmonary hemorrhage (EIPH) in elite endurance horses after competition, 20 endurance horses (9 geldings and 11 mares, age 7–13 years) that competed in the same endurance race in different categories (100 km FEI*, 70 × 70 km FEI** or 100 × 100 km FEI***), had a bronchoalveolar lavage (BAL) performed twice after the race (3–8 and 36–38 days after). Horses were not in training during the study period. In addition, 12 horses matched for age and trainer (11 geldings and 1 mare, age 7–11 years) had a BAL performed to be compared as environmental and management controls. Samples of BAL fluid were stained with hematoxylin-eosin and Prussian blue stains and routine cytological evaluation was performed to establish differential % leukocytes and the presence and % of hemosiderophages. The criteria to diagnose EIPH was hemosiderophages >1% in BAL fluid.

The proportion of horses with cytological evidence of EIPH in BAL fluid was 9/20 (45%) a few days and 10/20 (50%) after one month from the race. Six horses had EIPH at both sampling times, three 3 had EIPH only a few days after the race, and 4 out of 20 had EIPH only one month after the race. In contrast, only 1 out of 12 control horses (8%) had hemosiderophages present in the BAL fluid.

The prevalence of EIPH in elite endurance horses is about 45–50%, in contrast to what has been previously described in this equestrian discipline.

A3
THE INFLUENCE OF DYNAMIC RESPIRATORY ENDOSCOPY (DRS) ON THERAPEUTIC APPROACH AND OUTCOME OF UPPER RESPIRATORY TRACT SURGERY. C.M. de Bruijn¹, A.H. Schutrups¹, C.J.G. Delesalle². ¹Wolvega Equine Hospital, Stellingenweg 10, 8474 EA, Oldeholtspade, the Netherlands, ²Department of Comparative Physiology and Biometrics, Faculty of Veterinary Medicine, Salisburylaan 133 D1, 9820 Merelbeke, Belgium

Little is known about how application of DRS influences therapeutic approach and outcome of upper respiratory tract disorders. Patient records were retrieved of 48 horses with laryngeal hemiplegia (LH) and of 36 horses with dorsal displacement of the soft palate (DDSP). Resting endoscopy and DRS images were judged by 2 ECEIM diplomates independently, both with respect to grading (LH) as to therapeutic approach. Long term follow up was performed by means of a telephone questionnaire.

The inter-observer agreement Cohen's Kappa was 1 for the scoring of DRS images and 0.49 for resting endoscopy and 0.32 with regards to therapeutic approach for resting endoscopy and 0.42 for DRS. In 48% of LH cases, grading was adjusted negatively after DRS and positively in 16%. DRS resulted in the advise of more invasive surgery in 24–52% (observer 1 versus 2) of cases and lesser in 8–12%.

25 LH horses underwent a Tie-Back and VCD and 8 only VCD. Owners judged LH cases with a 6.5 pre-operative and 7.1 post-op score with regards to performance (70% improved) and 4.3 and 7.2 with regards to noise (69%). 21 DDSP horses underwent a Tie-Forward and staphylectomy. Trainers judged them with a 4.0 pre-op and a 6.5 postop with regards to performance (50%). Mean racing times of last 3 races pre-op compared to 3 races post-op had improved in 45%.

DRS increases inter-observer agreement for grading and therapeutic approach of LH. Successrate of LH surgery was comparable to literature (70%)³ whereas DDSP surgery was not (50% versus 80%).

A4
OWNER'S SURVEY OF ELECTROLYTE SUPPLEMENTATION IN AUSTRALIAN ENDURANCE HORSES, PRELIMINARY RESULTS. J.P. Farrugia, S.H. Franklin, E.J.M.M. Verdegaal. School of Animal and Veterinary Science, University of Adelaide, Adelaide, SA 5371 Australia

The use of electrolyte supplementation for endurance horses is subject to discussion and evidence for their use is conflicting. The aim of this study was to investigate electrolyte supplementation amongst endurance riders in Australia. An online questionnaire was made available to riders via the Australian Endurance Riders Association (AERA) website and social media over a period of two weeks. The survey included 41 questions related to the type, dose, method, frequency and timing of electrolyte supplementation level of competition and performance data including causes of elimination. Descriptive analysis was performed and potential associations explored using Mann Whitney tests (at $P < 0.05$). Endurance horses were mainly purebred Arabian horses (67.9%) aged between 5–14 years. 100% of responders (88) supplemented with electrolytes at different times: during training (67.9%), pre-competition (60.7%), during competition (85.7%) and post-competition (78.6%). Supplements were mainly used to replace electrolyte losses (37.5%) and were primarily supplied in food (78.9%) or in paste form (45.8%) while only 5.7% used salt blocks. Median dose rates were higher during competition (47.5 g) compared with training (30 g). Elimination rate was 14.3%, mainly due to lameness (75%), myopathy (7.1%) and high heart rate (3%). This pilot study suggests wide variation in electrolyte supplementation during endurance riding in Australia. However, larger numbers are required to investigate their use in more detail.